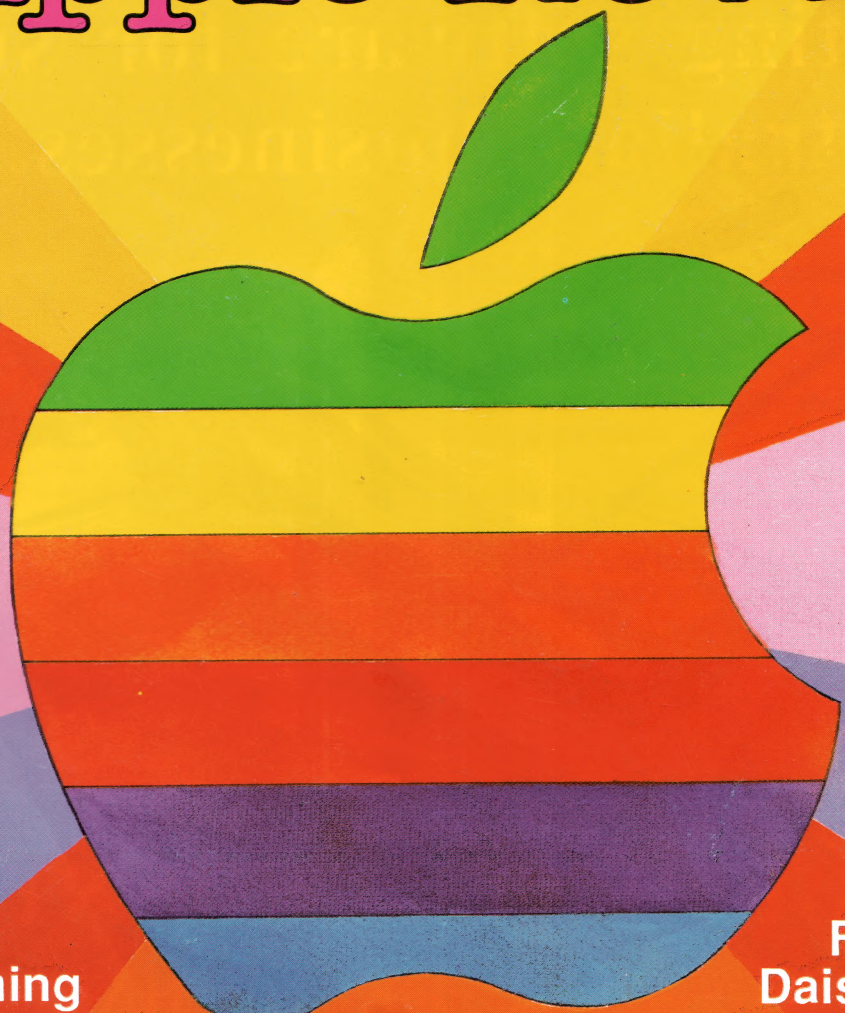
Vol 3 No 7 August 1986 $3*

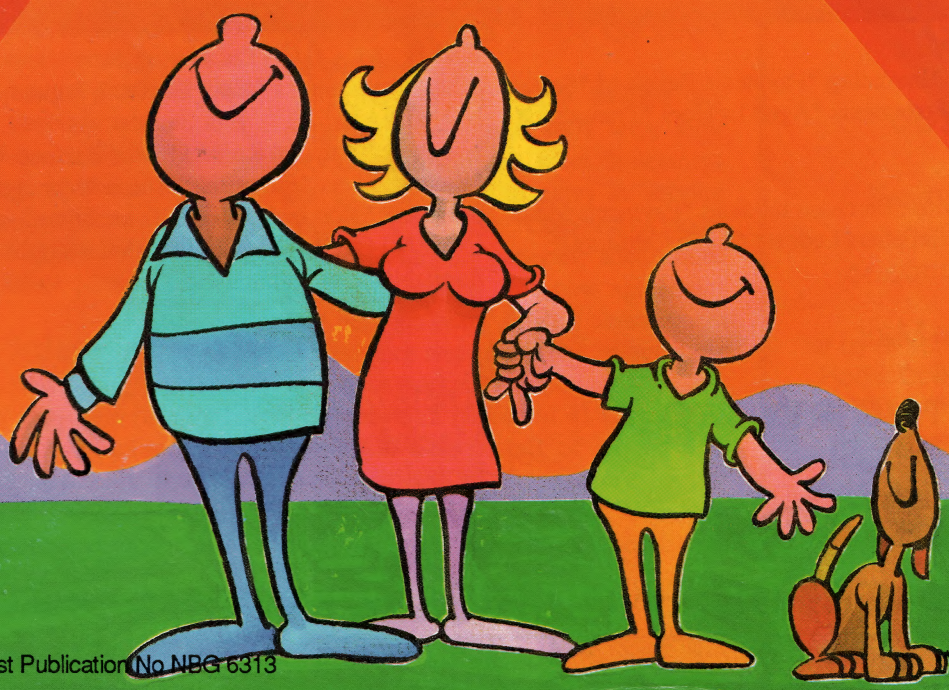
The Australian Apple Review



MacAuthor
Curve Plotter
Multiscribe
Flipper

Books
Education
Programming
Slide Show Magician

DrawArt
Flight Simulator
Daisy Professional
and much, much more



Registered by Australia Post Publication No NBG 6313

Recommended retail price

MACPUTER

'No Nonsense' Accounting software for small Australian businesses...

MANAGEMENT ACCOUNTING

MACINTOSH - 400K, 800K, OR HARD DISC
APPLE - 120K, 800K, OR HARD DISC

SALES
*Sales Transactions *Invoicing *Payments Received *Sales Reports *Customer Statements *Aged Debtors *Transaction Journal

PURCHASES
*Purchase Transactions *Purchase Invoices *Payments Made *Purchase Reports *Suppliers Ledgers *Aged Creditors *Transaction Journal

CASH ACCOUNT
*Cash Transactions *Cash Daybook Report

NOMINAL
*Budgets *Nominal Reports *Trial Balance *Profit and Loss *Balance Sheet *Financial Position *Management Accounts Summary *Nominal Ledger *Transaction Journal

INVENTORY CONTROL VERSION
Available as an optional extra

Telephone or Mail,
FREEPOST 4
XL COMPUTING PTY LTD
No 3 Little Queen St
Chippendale, NSW 2008.
Telephone: (02) 319-2844

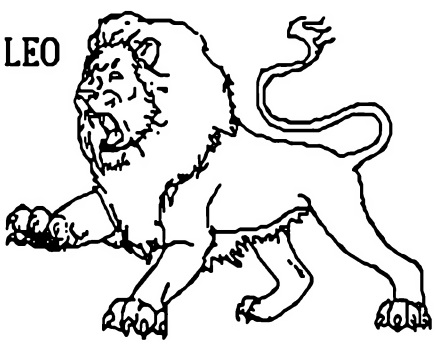
Rolling demo discs

Apple // (1 disc) $5.00
Macintosh (2 discs) $15.00
Includes: Discs, Postage & Packaging
Payment:
Cheque, Bankcard, Mastercard, American Express

TRADE ENQUIRIES WELCOME

The Australian Apple Review

Vol 3 No 7 August 1986



Contents

The Australian Apple Review
Top Rear, 4 Carrington Road,
Randwick , NSW 2031
Phone (02) 398 5111

Published by
Saturday Magazine Pty Ltd

Editor: Gareth Powell

Publisher: Gareth Powell

Advertising:
Ken Longshaw (02) 398 5111

Production: Brenda Powell

Subscriptions, back issues:
Tina Spathos (02) 398 5111

Distribution: NETWORK

Printed by:
Ian Liddell Commercial Printing

Editorial

ON OUR front cover we have Roy Bisson's imaginative interpretation of Apple Triumphant. We felt the time had come to record the fact that Apple - both the computer and the company - has made it, made it in a major way, made it in a way that its founders could never have imagined in their wildest dreams, made it in a way that astounds and dismays the legions of carping critics that ever surround us.

And it is appropriate because computers are based on binary logic - everything reduced to the power of two - that Apple's current success has come from a set of pairs.

First the two legendary founders - Steve Jobs and Steve Wozniak.

Then the two legendary machines - the Apple II and the Macintosh.

Finally, the two key factors in its success - price and performance.

Together they have brought Apple to total success.

At a time when the world of personal computers is in a state of chaos.

At a time when manufacturers who have followed the false vision of "me too" manufacturing are really hurting, Apple is triumphant.

Why is this?

Why has Apple seemingly found its second wind and is now forging on to new victories?

The simple answer appears to be that Apple have the technology to fit the demands of the times.

No longer are computer users content to put up with operating systems which are not only not friendly, they are positively hostile.

No longer are computer users willing to sit down and learn painstakingly and with much skull sweat how to run an application program.

They want machines that are powerful, upgradable, easy to use. They have this in spades with the Macintosh, which sells far more to the business market than it does to your basic happy home hobbyist.

No longer are computer users happy to have a print out which is composed of faded dots which are often adjacent, rather than touching.

They are no longer satisfied with spuriously named Near Letter Quality. They are not even satisfied with genuine Real Letter Quality. What they want, at the very least, is Near Printing Quality - or even something rather better. And that they get with the LaserWriter, a machine unique in its capabilities and power. (If two years ago we had told you Apple was about to produce a printer with two megabytes of memory you would have laughed and laughed like a mad thing with disbelief. But here it is.)

Users - especially business users, want the best.

With the Apple line of computers they have it.

Which is why we now see Apple Triumphant.

Gareth Powell

Bits and Bytes

Apple reports increased earnings

Apple Computer, Inc. reports that earnings for the third fiscal quarter ending June 27, 1986, were $US32.3 million or $US.49 per share.

For the same period a year ago, the company reported a loss of $US17.2 million or $US.28 per share. Net sales for the period were $US448.3 million, an increase of 20 percent over the same period last year when net sales of $US374.9 million were recorded.

Gross margins as a percentage of net sales for the quarter were 52.7 percent and 53.1 percent for the year-to-date. For the same periods last year, gross margins were 41.2 percent and 40.6 percent, respectively. The improvement in gross margins, in part, reflects Apple Computer's continued control of costs. Inventories totaled $US100.3 million, a reduction of $US136.5 million from the same quarter the previous year.

"These results are in line with our expectations," noted John Sculley, chairman and chief executive officer. "We are beginning to see revenue growth as our Macintosh computer products gain acceptance in the business market, and our Apple II line continues to hold a leadership position in the education market. Now we intend to increase investment spending to sustain our revenue growth in future quarters."

Australian Sales

According to David Strong, managing director of Apple Computer Australia, the local company continued to record strong results with sales levels ahead of the overall personal computer market, which slowed slightly during the period.

"Accelerating Australian sales confirmed a healthy and steadily increasing business demand for the Macintosh Plus. This was also reflected in strong sales of business peripherals like the Hard Disk 20 and LaserWriter desktop publishing systems.

"According to independent research figures, combined sales of the Apple II and Macintosh product families demonstrate Apple's continued strength as the dominant personal computer manufacturer."

Honeywell to provide major accounts site service for Apple

Rapid Australian business market penetration by the Apple Macintosh in recent months has led to the signing of a national site maintenance agreement with Honeywell Limited.

According to Apple Computer managing director David Strong, the agreement will ensure that major business and government users of Apple products will gain prompt and expert on-site service.

"Although all Apple dealers are required to maintain staff with high service qualifications, most dealerships are geared solely to carry-in service operations," he said. "Conversely, major business users are generally accustomed to on-site service. The new agreement will help maintain Apple's commitment to customer responsiveness in our most important market."

Honeywell maintains 41 sites across Australia, with a staff of around 500 providing one of the nation's largest third-party organisations. A major training programme is now underway and the site agreement will come into effect during August.

According to Honeywell's general manager for Customer Services, Graham Moore, the company's "TotalCare" service programme has been developed over 20 years and boasts a commitment to quality matching that of Apple towards its own products.

The Australian on-site agreement follows a similar arrangement which has been in effect between the two companies in the United States for more than a year.

MacAuthor

more than a word processor

by Gareth Powell

I am probably not the person who should be writing this review. Because I have never considered the Macintosh the ideal word processing machine. In every other respect it is probably the best computer that has ever been designed.

If anybody wants to have an argument with me about it for desktop publishing they are welcome. I think the Macintosh is so much better than the opposition that it leaves them for dead.

If anybody asks me what I consider the best spreadsheet program in the world then the answer is obviously MicroSoft's *Excel* which is only available on the Macintosh. In these areas, as in so many others, the Macintosh stands supreme.

But as a word processor it is less than perfect.

First of all I consider the keyboard to be too high off the desk for fast typing.

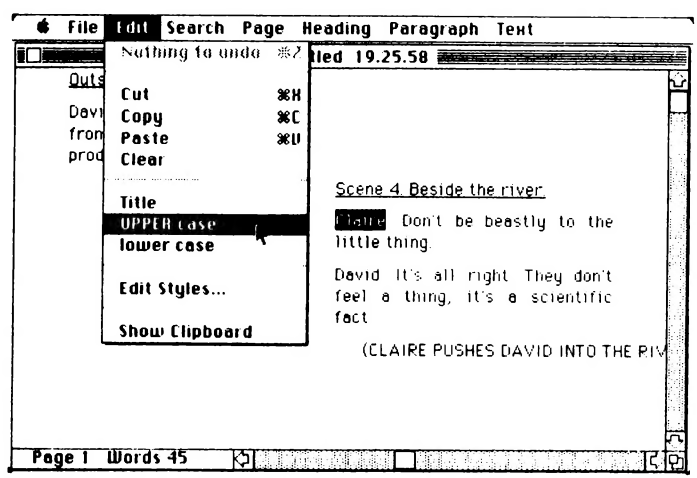
I like a keyboard that is flat and hugs the desk very closely. You may think that this is a personal opinion, which it is, but it is also supported by the German Institute of Standards and by most of the world standard authorities who say that the forward lip of a keyboard - the edge nearest your fingertips - should hug the desk and under no circumstances should be more than 1cm high. But this is a minor point.

Changing the case

The names of the characters in the dialog also need to be in capitals.

• Double-click on the word `Claire` to select it.

• Choose 'UPPER case' from the Edit menu.



• Change the word `David` into capitals in the same way.

My major problem is that I have to use the mouse.

While the mouse is the perfect tool for graphics, it is useless when it comes to word processing. When I am writing I like to hammer the copy in directly and keep my hands firmly on the keyboard.

With most machines I can do this while moving the cursor around for corrections using the cursor keys. With the Macintosh I have to stop, take my hands off the keyboard, grab hold of the mouse, cursor click, put my hand back on the keyboard and start typing again. I find this slows up my speed. And it interrupts my flow of thought.

Microsoft with *The Word* have gone a long way towards solving my objections by making most of the controls operable from the keyboard. But they can't do anything about moving the cursor around the screen to a precise position in a word. For that you still have to use the mouse.

If you are only using word processing on a part-time basis it may not be a big problem, but for me it is a major hassle. Normally, when I am writing, I put the copy into another machine and transfer it over to the Macintosh using *MacTransfer*.

Now a new word processing program has come out of England which is so powerful and so elegant that it might, just might, talk me into using the Macintosh

" . . . a new word processing program . . so powerful and so elegant that it just might talk me into using the Macintosh as a word processing machine. . . "

as a word processing machine.

I have been hearing about this program for over a year. Academics kept phoning me up and kept asking me when it would be available. I couldn't understand what their excitement was about.

Now having used the program I can see why it would be immensely attractive to somebody who is writing a thesis. It would also be extremely attractive if you were producing presentations and sophisticated reports. And it is, in a way, a desktop publishing program.

What *MacAuthor* has going for it that sets it apart from other word processing systems is that it contains almost every single function that I have ever seen on a dedicated word processor.

You can convert any word into capitals from lower case and vice versa.

This is vital for people who are writing film or television scripts where all of the action directions are put in capitals.

You can set up styles for every type of writing that you do and store it on what the program refers to as "Stationery Pads".

For example, you could have letterhead stationery which would contain your address, your logo and styles for the address, the date and your main paragraph and so on.

You can have a 'Manual' stationery pad, a 'Film script' stationery pad, a 'Newspaper article' stationery pad and so on.

You name it and it can be set up, then made permanently available. This removes many of the problems which are inherent in word processors.

If you want to write creatively, you don't want to spend your time setting up a page, defining how the heading is going to look, working out what tab spaces you should have, defining the width and depth of the page.

You just want to sit down and start bashing away. This probably accounts for much of the amazing success of *MockWrite* with the Macintosh. It is a program which has absolutely nothing in the way of facilities - it only offers you the capability of hammering words into the machine. Which is probably why most writers like it.

MacAuthor has taken this *MockWrite* approach by creating what is, in effect and in fact, a dedicated typewriter for every task which you will ever have to tackle.

You only have the bother of the initial set up with the type faces, styling detail and parameters you require. After that you only need to select the appropriate page of your stationery pad and start hammering away without a care in the world.

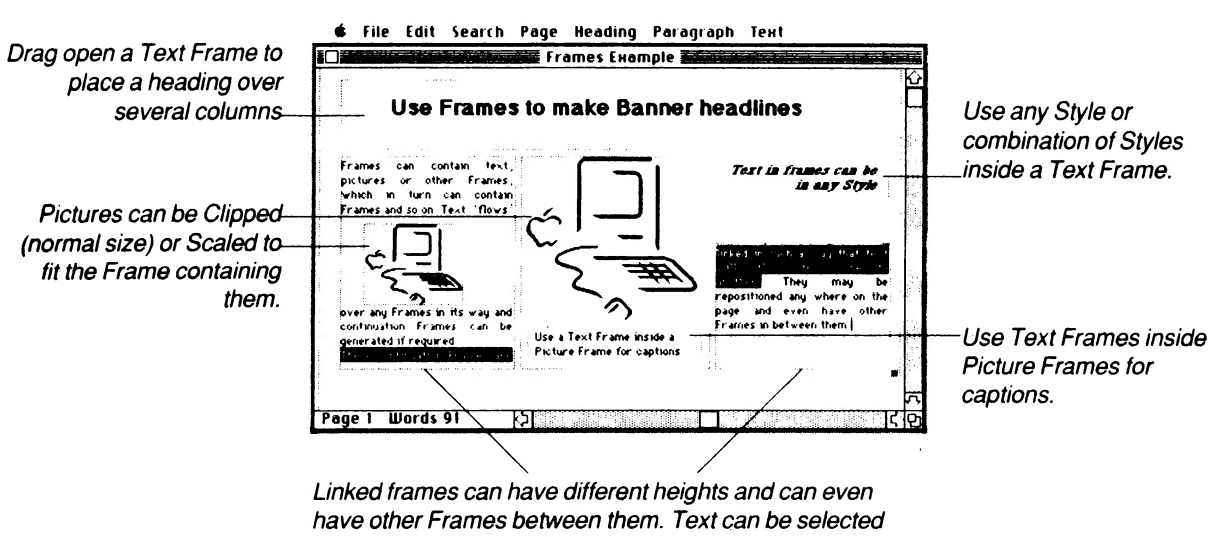
" . . . it contains almost every single function that I have ever seen on a dedicated word processor. . . "

There is a lot more than just stationery pads - excellent idea though they may be - going for this program.

For example, you can open up to four different windows, although, of course, only one window will be the active window and indicated by a highlighted title bar. You can make any of the windows displayed active by clicking on it.

Which means you would never have to use the Scrapbook to transfer from one document to another.

Some of the facilities that are available on the program show the



background of the author.

For example, if you have a line of type you want to consider as the title of the article you can select Title from the Edit menu.

When you do that the selected text will change to lower case throughout, except the first character in each word which will be changed to upper case.

This is a style of producing headings which went out some time before the Second World War, although it is still used in the London *Daily Telegraph* and *Yorkshire Post* and the *Wall Street Journal*. It is positively Victorian. It is also archaic and ugly. The idea that it should be included in a word processing package on a modern personal computer is totally anachronistic.

In the Search and Replace the program allows you to use wild cards, but also has some other sophisticated techniques.

You can say what you do not want the program to find rather than what you do it to find. Bit confusing, that. For example you can tell the computer to find you every word that does not contain any numerals or any vowels. Or any other combination you care to think of. You can also tell it to find words within very narrow definitions.

The example given by the manual is that you can find both the disc and disk in a document.

Which is all very jazzy but one cannot actually imagine a situation where one would wish to do it. If one did no doubt this would be immensely useful.

MacAuthor keeps referring to its Style Editor.
I was always under the impression that a Style Editor was something that went through your manuscript and saw that your English fit the style of English that was used by the publication you were writing for.

We have a style manual at the *Sydney Morning Herald* and we have a Style Editor.

MacAuthor has a new definition of Style Editor. The program defines style editor as the means by which the program will work out how your finished copy is going to be printed out. This is useful - even essential - and the way in which it is produced on *MacAuthor* is quite remarkably thorough. But it is not what I think of as a Style Editor.

A function within *MacAuthor* creates a frame.

This is perhaps one of the most important functions in the program as it almost makes *MacAuthor* into a desktop publishing program.

You can select a frame at any time either on a page or inside another frame. Once you have created a frame you can choose whether it will contain text or pictures. And you can also choose to have text frames automatically generated into continuation frames.

This is not a million miles from what is done with the *Ready Set Go* version 2.3.

Note that these frames can be constrained to a square or a Golden Section at the time you create it.

(This Golden Section idea is quite fascinating. The Ancients stated that the proportions of 1: 1.618 are the most aesthetically pleasing of all geometric forms. And they are probably right.)

Which means you can choose the Golden Section when you create a square and no matter what size you make that frame it will still remain in those proportions.

Pictures used in the frames can either be clipped or scaled. If you use a clipped picture it always retains its original size and if the frame is too small only a portion will be shown. The clipped picture frame size can, of course, be adjusted and the picture moved into the frame.

A scaled picture on the other hand adjusts its size to fit the frame. And if the option key is pressed when pasting into the frame it will retain its existing proportions, adjusting the frame size where necessary.

This is infinitely more sophisticated than the systems available in any desktop publishing program currently on the market. With most you have to choose one or the other. To have access to both systems and to have an automatic resizing of the picture is a quite remarkable facility.

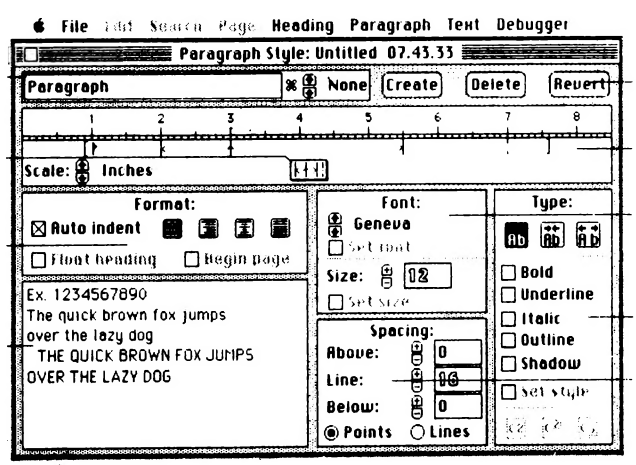
With *MacAuthor* you can do all the usual things such as headers and footers, page numbers and so on.

But *MacAuthor* does not contain the ability for soft hyphenation (which is available on Microsoft's Word) and it does not have a built-in dictionary.

MacAuthor is neither a total desktop publishing program nor yet is it a narrowly confined word processing program.
It is a bit of both, and it would be fair to say in most cases it has the best of both worlds.

New versions of *MacAuthor* are continually going to be popping up over the next year as the program is steadily improved.

There is a concept in the computing world of the "power user". For the power word processor the program *MacAuthor* may be very well just the ticket. It has a lot going for it.



HABA NEWS

HABA RELEASES NEW RANGE OF APPLE II AND MACINTOSH SOFTWARE

One of the greatest batches of new micro software in Australia was released this month by Haba Systems. The programs for Apple II, Apple Mac, Atari, Commodore and IBM are some of the best written, best presented and most useful available, and what's more they come at retail prices so low you'd think they were meant to be the wholesale price!

There are eight new products for Apple II and seven for the Macintosh.

For both IIs (at $232) and Macs (at $310) the Home Accountant is a must for anyone trying to sort out their financial life or small business accounts. It has sold over 350,000 copies in America and is the most popular home accounting package in that country.

Other APPLE II products include:

HABACALC. The spreadsheet program for IIs that is as powerful as it is easy to use. 64 colums and 254 rows give plenty of room for calculations. Cut, copy and paste commands make editing a breeze. $155.
HABA TEMPLATES. 54 Business, Home and Personal Templates. Ready to Use Data Base and Spreadsheet templates for AppleWorks and ///E-Z Pieces. $93.
HABA MERGE. The Form Letter/Mailing Label program for AppleWorks and ///E-Z Pieces. $155.
F.C.M. F.C.M is the single program you'll need to file catalog and prepare mailing labels for any imaginable use. $155.
HOME CATALOGER. A flexible and easy to use filing system. $155
BUSINESS LETTERS. Over 50 pre-defined letter and memo formats. Fill in the blanks and your letters will be professional and eye-catching. $93.
SPELL IT. A dictionary of over 33,000 words. $93.

Other MACINTOSH products include:

HABADEX 2.0. Manage your desk with a Data base, Automatic phone dialing, Appointment Book, Communications and print mail lists, merged letters etc all in the one program. $310.
QUARTET. Powerful Spreadsheets for only $155.
QUARTET TEMPLATES. Over a dozen pre-defined spreadsheet formats. $93.
HABA MACINTOSH SOLUTIONS:
CHECKMINDER. The easy to use home accounting program that displays and works with cheques, deposits etc. $155.
WINDODIALER. Displays up to 250 names and 500 phone numbers. $93.
QUICKFINDER. A handy Desk Accessory that allows you to move directly from one Macintosh application to another without returning to the Desktop. $93.

Please send me the following products:

_____ Price $_____
_____ Price $_____
_____ Price $_____
_____ Price $_____
TOTAL: $_____

NAME: _____
ADDRESS: _____
STATE: POSTCODE:
TEL: _____

My method of payment is: (circle) Cheque enclosed
Charge my Credit Card.
Type of Credit Card: American Express. Visa.
Mastercard. Bankcard.

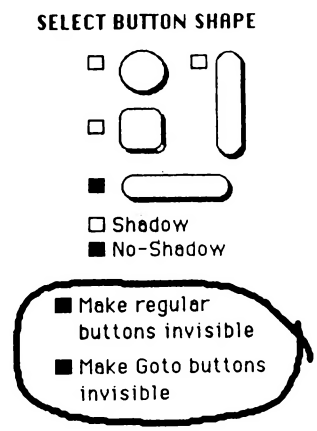
Credit Card Number:_____
Expires:____/_____/_____

Signature:_____Date____/_____/___

HABA SYSTEMS PTY. LTD.

576 Malvern Road, Prahran, Victoria, Australia 3181. Tel (03) 529 4844. Telex 52680 CYBRCH

I recently held a seminar on desktop publishing. Basically it was about what you could do with a Macintosh and a Laser Printer to save time and money and impress your friends. The seminar lasted for two days and to save my voice I constructed a slide show which had several hundreds of slides. All of the slides were on the Macintosh. From the Macintosh they went to a projector and then to the big screen. These slides were the hit of the show. I had more questions regarding the program that was used to put together the show than I had questions about desktop publishing itself.



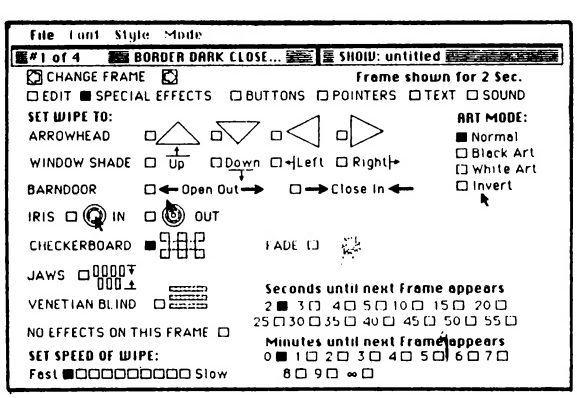
by Gareth Powell

Although I prepared the show when, in truth, I wasn't feeling quite myself, the slides looked extremely professional and moved elegantly one into the other using a variety of cinematic techniques. The credit must go to the Macintosh and the program that I was using rather than my cold enfeebled brain.

The program I used to prepare the show was *Slide Show Magician*. At the time I only had version 1.0 which had some small bugs in it. I've now got version 1.3 which has got all the bugs fixed and works like a dream.

The way in which *Slide Show Magician* works is this.

First of all you prepare an image using *MacPaint*. You are confined to the top lefthand two-thirds of the *MacPaint* total screen - that is, not the screen that you see on your machine but the screen that is available for access - and the program very considerately gives you a grid to show you the areas in which you may work.



Each of those images can then be linked to another using a variety of fades. These fades or wipes can be extended from zero seconds to infinity. As well, you can add a series of buttons to the screen which tell you to go forwards, go back, stop, quit.

Those are the basics. It is then the rather elegant touches come into place.

You can choose to have a pointer on the screen which can either be a big hand or a little hand, a big arrow or little arrow, a big pencil or little pencil. You are, indeed, spoilt for choice. You can also have messages printed on the screen. They can either appear immediately your slide comes into view or may be spelt out word by word or even letter by letter. You have a very wide range of fonts to choose from - in fact you can load any fonts that you have available into the program.

Even more amazingly, you can put a subliminal message on the screen which will flash to the unknowing audience and will imprint itself in their subconscious. I put in a series of messages telling people to wake up and pay attention. I am not sure whether it was due to the messages but I certainly had a very lively audience.

Nor need your slide show be silent.

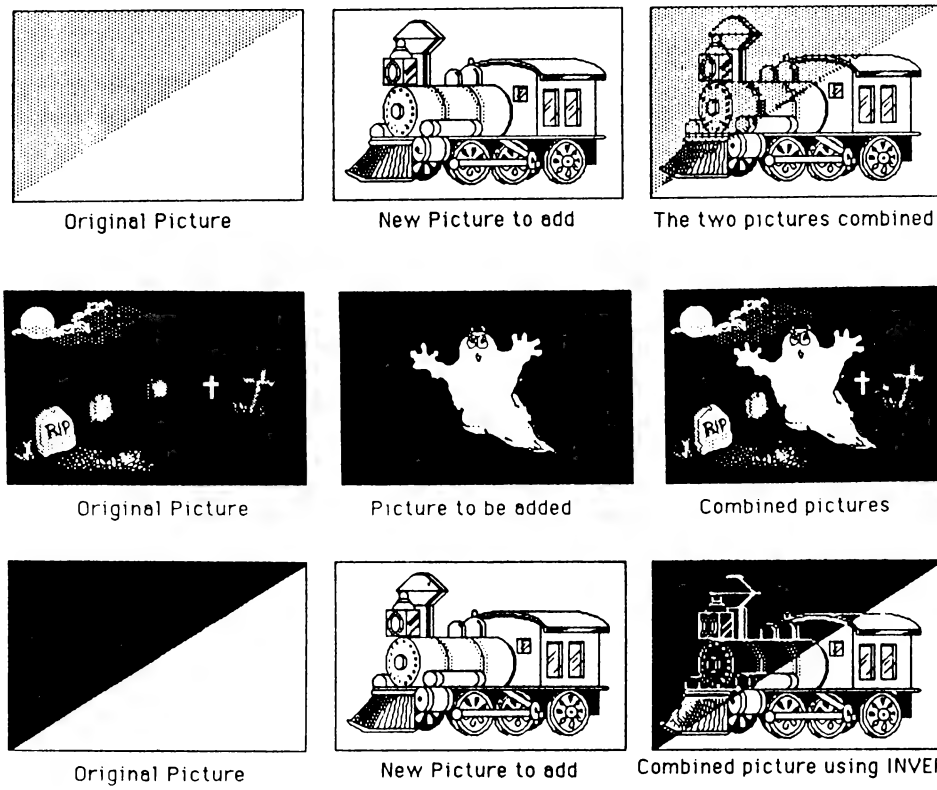
You can add sound to your slide show in one of four ways.

* The first way is for you to stand by the machine and talk yourself. This is the method I chose and it worked pretty well.

* Secondly you can get *Macintalk*, a sound program distributed by Apple Users' Clubs. The result will be a commentary which will sound the same as that read by a Dalek. If that is what you like, there is a supplementary disk available from *Slide Show Magician* for you to utilise it.

* Third way is to use a tape recorder. There is a synchronising cable, again available from *Slide Show Magician*, and this allows you to select whether you want the sounds to control the Macintosh and tell it when to change frames or whether you want the frames of the Macintosh in *Slide Show Magician* to turn the recorder on and off. A sort of two way synchronisation effort.

* Fourth and finally, you can use digitalised sound. This is high quality digitalised sound, but it requires a very special adaptor cable which you can get, again, from *Slide Show Magician*. It connects from your tape recorder to a Macintosh port. You create the recording on a tape machine and then the sounds are transferred by cable onto your slide show frame.



This last system uses up an immense amount of disk space so you can only really operate it with a hard disk.

It is a fairly complex program and it so fills a standard disk that they have had to leave off the Finder and ImageWriter. This is no great hassle.

What is a great hassle is the fact that the disk is heavily protected. This is a damn nuisance.

Especially if you are using a hard disk, and if you are making a professional slide presentation then a hard disk is really the only way to go. You cannot load all of this program on to the hard disk. When you boot you have to have a copy of the original disk handy. On one occasion this nearly brought me to grief. A plague on all copy protection systems.

This is not the time to start going into the moralities of piracy and copy protection. But it is worthwhile mentioning that the most successful software publishing house in the last few years has been Borland, run by Philippe Kahn who produces *Sidekick* and *Turbo Pascal*. That company sells hundreds and hundreds of thousands of programs every year and has never copy-protected any of them.

In fact this copy protection is the biggest and possibly only drawback to *Slide Show Magician*. I spoke to Magnum, the publishers in the United States, about the bugs in their earlier version, and they had what can properly be termed a cavalier attitude. "That was last year, we don't know anything about that."

This attitude shows up in the packaging of the program in that version 1.3 - which is massively different from the original version - still has the same manual with a nine page supplementary manual to go with it. This is hardly good enough.

Here we have one of the most sophisticated presentation programs around and with it we have manuals which are something less than totally felicitous - or fairly rubbishy, depending on your point of view.

Note carefully that *Slide Show Magician* can be used for other things apart from constructing simple slide shows.

You can, for example, write a very excellent education quiz where the answers can be multiple choice with the boxes for clicking on. Clicking on the right answer will transfer you to another screen which will say "Congratulations, you got it right".

Clicking on the wrong answer will send you to another screen which has a rude message.

On the original program you were unable to run on a hard disk. The version 1.3 has solved this problem and there are also a lot of very worthwhile additions.

There is no doubt in my mind that *Slide Show Magician* is the best program of its sort available, not just for the Macintosh but for any other computer on the market today. I know this because I went shoppping in order to produce my desktop publishing seminar.

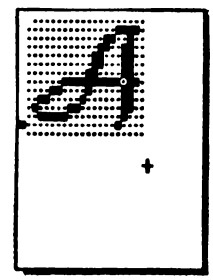
This is not to suggest that my seminar would have been a disaster without *Slide Show Magician*, but it certainly helps massively.

All the program needs now is a first rate manual and for the publishers to decide to sell it unlocked.

Then it will be very close to being the ideal presentation program.

MULTISCRIBE

Desktop publishing for the Apple IIe/c?



by Gareth Powell

THE NUMBER OF programs which are closing the gap between the Apple II series and the Macintosh increases every day. The desktop and icon concept of the Macintosh has "taken" on computers in a big way. Even the IBM and its many clones can now use something similar in Gem from Digital Research. And we are seeing more and more on programs for the Apple IIe and IIc.

This concept is called WIMP. The W stands for window, the I for icons, the M for mouse and the P for pull down menu.

A new program called *Multiscribe* has taken this concept by both hands and used it to the full. You do not need a mouse on your Apple II to take full advantage of all its facilities - but it truly does help.

Multiscribe is a serious word processor. It includes all the basics you would require in a complete professional word processing program.

For example there are full text formatting options such as left and right and full justification, centring, indent, margins and tabulation. There is a complete find and replace system working on either a whole word or a partial word. It can also be case sensitive or non case sensitive. That is, it will recognize if you have capital letters in a word or not as you choose.

All the standard text editing features including cut, copy, paste and replace are there.

The program works on the basis of the ProDos file system, which means incidently that *Multiscribe* can work with ASCII files created on AppleWorks. And vice versa. That is, *Multiscribe* files can be used with the AppleWorks word processing program.

If this were all *Multiscribe* did, we would all have a polite yawn and move on to the next. But *Multiscribe* does a lot more than this. It could best be described as a program in transition. It is moving the Apple IIc and Apple IIe nearer to the concept of desktop publishing than any program we have so far seen.

For example, there is a Font Editor which allows you to create your fonts or use ten of the fonts which come with the *Multiscribe* disk. These fonts are not true desktop publishing fonts, because the highest they go to is 28 points which is not very large. (Typically the headings in this magazine are around 36 points.)

By using a scaling option on the *Multiscribe* disk it is possible to increase the size of characters to a very useful 72 points. However at this point the characters appear less than felicitous.

Plainly the publishers of *Multiscribe* are working very tightly within the limitations of the Apple II with its, relatively, restricted memory. It does not appear to work with the major memory cards which will take the Apple II up to several megabytes of memory.

However *Multiscribe* is RAM based, and on a standard memory giving you a maximum file of about 30K, which is about five thousand words, you can merge up to 16 files together for printing and the pages will automatically be renumbered.

Multiscribe should be able to take advantage of the new memory expansion cards and the publishers say that it does not "currently take advantage of the extra memory beyond 128K". That word currently is very indicative of the fact that this is a program in transition.

The number of printers that the program supports is

extensive and, as far as we can tell, pretty well all inclusive.

Again it is interesting to see that none of the printers listed are anything but dot matrix, and it would be a fair bet to say that this program would be available for the LaserWriter in the not to distant future. The typefaces which have been chosen to be included definitely lead to desktop publishing. Specifically the pictorial font Michelangelo which allows you to add little thumbnail sketches to your copy is a straight lineal descendant of Zapf Dingbats which is available on the Macintosh.

Each time you use *Multiscribe* you will be irresistibly be reminded of the Macintosh. It is, amazingly, rather more comprehensive than the normal Macintosh word processing and desktop publishing program in that it allows you to design your own fonts. We know of no program on the Macintosh which will allow you to do that.

The final question is of course would we buy it? And the answer is a categorical yes. It appears to us as it stands it is a very professional word processing program that allows us to use the IIe or IIc to its fullest advantage when linked to a dot matrix printer. I

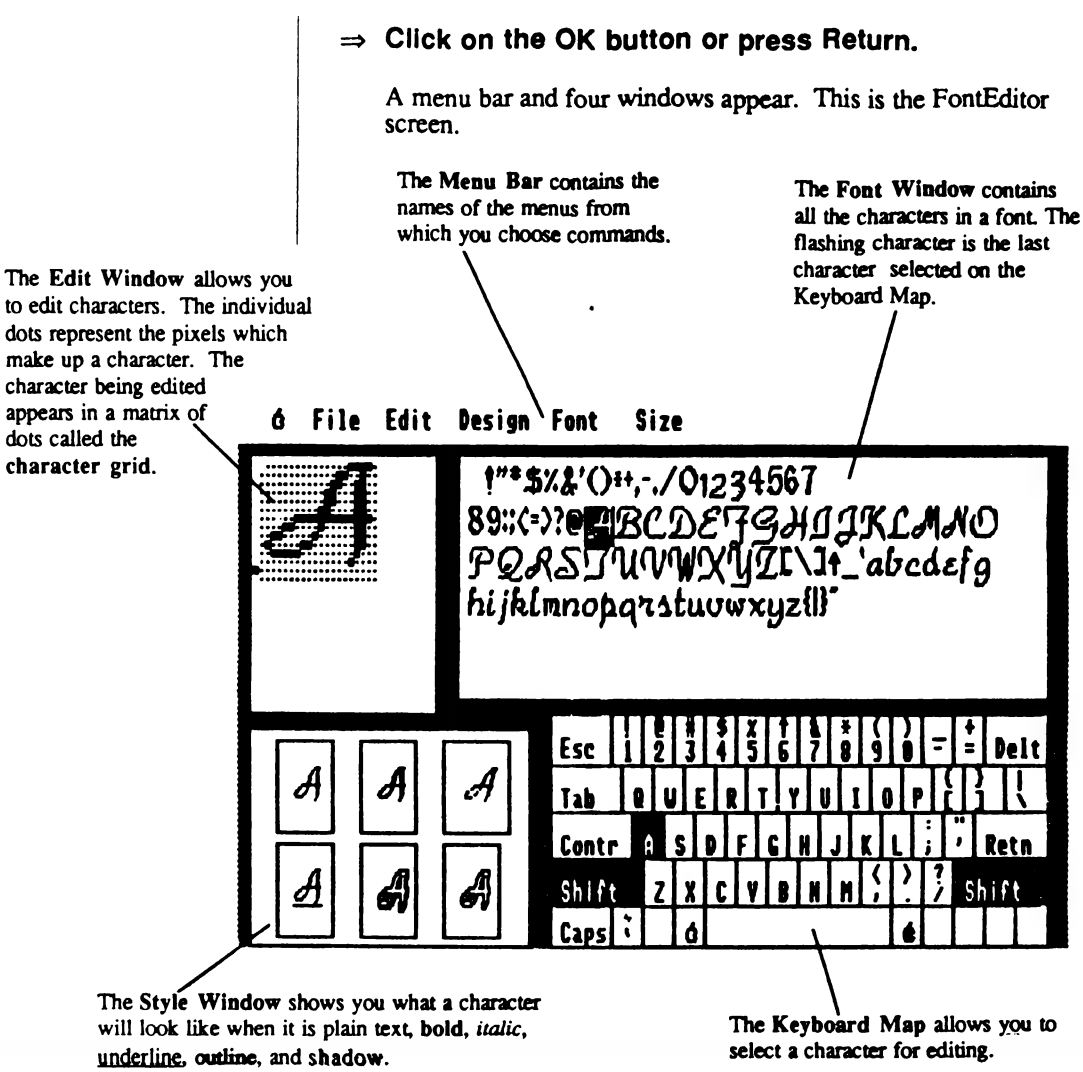
It provides a wide range of type and the possibility of including at the very least thumbnail sketches and at the most illustrations created with the font designing part of the program.

But it is in our opinion only a first step.

This is plainly a program that is set precisely so that it can take advantage of any upgrades in memory or speed of operation which will come along for the Apple II in the near future. As in, would you believe, less than two minutes time.

If this program were linked to a LaserWriter, and if the memory available on the IIe was larger and could be accessed by the program, and if a graphics program not dissimilar to *MacDraw* could be somehow squeezed into the memory available, then this would be very close to being a serious desktop publishing program.

And that is what we think it is. The first step on the way to producing a program which will make the Apple IIc and Apple IIe into serious desktop publishing machines. Mark my words.



Taipan

China Trading in Basic

by Gareth Powell

ABOUT FOUR years ago I acquired in Hong Kong a program called *Taipan* which emulated the adventures of a China trader in Asia in the 19th Century. It was a delight to play and I still know several people who are addicted. There were very few bugs in the program - a couple of spelling mistakes and one mathematical malfunction - but apart from that it was an excellent example of how games of this sort should be written. It seems that with computer games there are crazes which start, soar to a peak and then die away. Taipan was one of these crazes

Many parents refused to allow their children to get near it because the only way you could win was to trade in opium. I agreed with them on this and on my version of the game I changed opium to diamonds.

I never knew who wrote the program, as what I had received was a copy of a disk and there was no packaging available.

Now comes this amazing book called *Taipan* by Art Canfil, Jim McClenahan and Karl Albrecht. This is a programming handbook which teachs the reader to write *Taipan* in Basic, and the end game is precisely the same as the original *Taipan*. Which came first? The idea for the book or the book itself? I simply have no idea and the book is not forthcoming on the subject. Which makes it one of those small mysteries of computing.

Taipan is illustrated throughout with pictures by someone called Chrisann Brennan. I make the presumption that she is a female. She is a very considerable artist in her own right and her illustrations add a great deal to the appeal of the book.

The book takes you through the programming of *Taipan* bit by bit, explaining the background, and then lists the basic sections of the program and shows how they fit together.

The result is a book which is both fascinating to read and easy to follow.

If anybody reads this book all the way through and keys in the program, there is no doubt that at the end they will have a complete mastery of the basics of Basic and a very solid understanding of how China Trade was conducted in Asia in the last century.

Back to that small mystery. What I can't quite see is how the three authors and the illustrator got together to produce this book.

Did they think of the game first and the book second?

Or did they think of the book and the game at the same time? It doesn't really matter.

The result is one of the most outstanding books for personal computers which we have seen since the Apple sailed forth like one of the Taipan's trading ships in 1977.

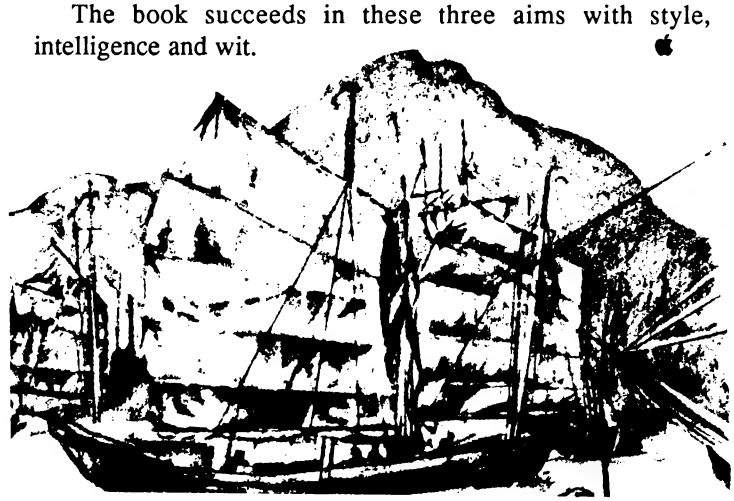
In the introduction the authors say that the book is intended to give the Apple II user three things.

1. A understanding of some fundamental principles of game design.

2. A geographical and historical understanding of a particular game context - in this case, Asia and the turbulant China Trade of the 1800's.

3. A step by step approach to actually writing a game in Basic using points one and two above, including the actual program line needed to provide a complete textual computer game.

The book succeeds in these three aims with style, intelligence and wit.



bbC Compiler

by MIX Software from Techflow Pty Ltd

The MIX C system is powerful; it compiles twice as fast as the others, is completely standard and very easy to use.

For only $75.40 you get:

* **A 450 page book** with tutorial/sample programs and extensive reference section.
* **A fast, standard, full featured C compiler** that supports all data types, bit fields, enumerations, structure assignment, and passing/returning structures.
* **A fast linker** that loads separately compiled files, searches libraries and builds and executable program.
* **An extensive library** of more than 170 functions (standard C functions and direrct access functions to operating systems and BIOS).
* **Tools** that allow you to optimise for minimal space or maximum speed.

A full SPLIT SCREEN EDITOR with macros for only $54.50

The ASM utility for only $19.00 to call assembly language routines from your C programs, or C functions from assembly + useful assembly functions.

SPECIAL LIMITED TIME OFFER
Buy both Compiler and Editor for an incredible $99.90 - a saving of $30.00 on the regular price.

PLUS-WORKS

by Norwich Data Services
distributed by TECHFLOW Pty Ltd

for Appleworks on Apple II, II+, IIe, compatibles

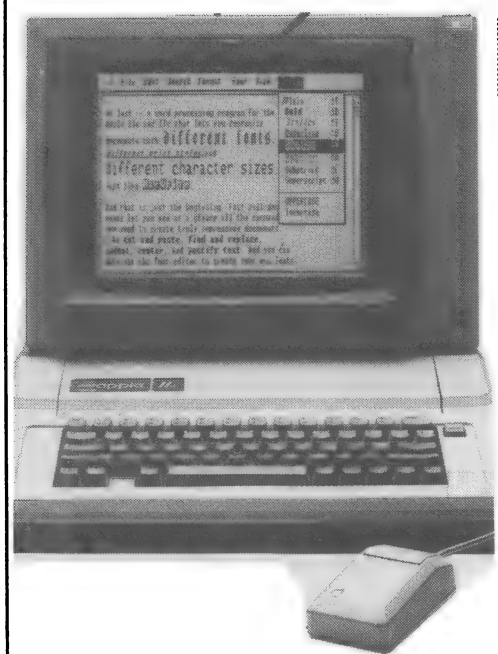
BASIC version	**$35.75**
ENHANCED version	**$87.50**
IIe version	**$87.50**
MEDFLY/LINGO version	**$87.50**

* expand database to 4222 records, optional RAM disk
* most 80 column and memory cards supported, and all versiona of Appleworks

Memory Pack - 128K RAM card with enhanced version for 136K desktop **$189.00**

Enquire about our special **1 meg RAM card pack**

Multiscribe
Creative Writing for Your Apple IIc/IIe



Now your Apple IIc or IIe can offer you the type of creativity that you might have thought was available only with a Macintosh. MultiScribe is a full feature word processor that uses double hi-res and proportional spacing to give your Apple all the character of a Mac.

You supply the imagination. MultiScribe does the rest.

There are no complicated commands to learn. Easy to use pull-down menus provide you with a wide range of type styles, character sizes and text formatting options. You can choose the typeface that's right for your text - or create your own custom fonts with MultiScribe's font editor. And MultiScribe gives your writing style - any style, from bold and underline to italic, outline and shadow - just like MacWrite.

If you're afraid of mice, don't worry.

With MultiScribe, you have the option of using a standard keyboard or a mouse. Use your mouse to pick and click commands from the pull-down menus... or use the arrow keys for "keyboard mouse" action. Each MultiScribe option has a keyboard equivalent displayed right on the menu, giving you the best of both worlds.

Don't upgrade your old computer, just your old files.

MultiScribe works with any IIc or IIe equipped with extended 80 column card and most dot-matrix printers, including Imagewriter, Epson, and Okidata. You can even use MultiScribe to customise files created by other word processing programs.

Best of all, the price.

MultiScribe is available for only $119.90, from Techflow Pty Ltd.

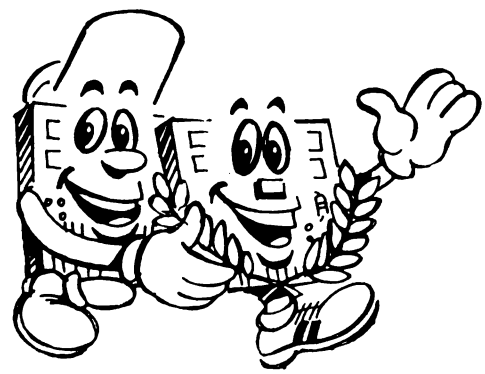
Stop Press good news - MultiScribe now is supplied non-copy-protected.

$4 post/pack on each order.
Software Licensed by the Australian Distributor,
TECHFLOW Pty Ltd, PO Box 4, Woodford, 2778.
Phone 047-58-6924 Tlx-171333 TECFLO

Dealer enquiries are welcome

Product: Flipper
Description: 1 Megabyte RAM board for II+ and IIe
Necessary hardware: One disk drive
Necessary software: any of ProDOS, Pascal, CP/M 2.2 or 3, DOS 3.3.
Available from: Thinking Systems
Cost: $899 (tax paid)

Flipper



by Gene Stephan

RAM boards are great things to have, but sometimes their cost may not be justifiable in terms of the benefits they may reap for you, the user.

Some people with Apples from the late 70s will remember when the stock Apple was 16K and 48K was a luxury reserved for the rich and famous. Then 48K became the norm to handle all the games and graphics and 16K became reserved for those other machines not yet at the leading edge. The introduction of the Softcard and serious business applications, such as *Visicalc*, then pushed people into RAM boards to boost to the 64K limits.

Enough of history. What this reviewer is trying to say, without getting into the mechanics of 8 bit processors such as the 6502, is that 64K is a physical limit (without bank switching) and Apple software developers know this just as well as they know HOME will clear a screen. So most of the software currently (there's an escape clause) does not support the extra RAM.

Having said that, one of the most important applications packages for the IIe is supported by such RAM boards - Appleworks 1.3.

This means that the most common use for the extra RAM will probably be as RAM disk - a virtual disk drive in memory. Before proceeding with the review, some of the advantages of the RAM disk are worth itemising:

1. Speed - RAM disks zoom. They are as fast as memory.
2. Relief for mechanical drives - less accesses.
3. Storage Capacity - the number of drives to which data or programs can be stores is increased.
4. Speed - the increase needs mentioning again, particularly with programs which access the disk drive for overlay files or do periodic saves.

Other advantages of extra RAM are:
1. Increase in size of data/work files in memory (where supported).
2. Increase in flexibility if part of the RAM can be partitioned as print spooler, part as disk and part as data/program.

But there is one very great disadvantage, particularly when relying on a RAM disk for saving data. If the RAM is dynamic, then switching off the computer, or even a power spike, will return your board squeaky

```
/\/\ FLIPPER /\/\    (c) CIRTECH 1985   #1

    1.  SELECT A WORKAREA

    2.  BACKUP A WORKAREA

    3.  RESTORE A WORKAREA

    4.  CLEAR A WORKAREA

    PLEASE SELECT AN OPTION (1 - 4)

3 AREAS                    CURRENT = UNUSED
```

clean and free of any of those painstakingly entered files.

So, on to the product. With all the above considerations in mind, Flipper is excellent. The product consists of a board, a disk and a short manual (30-odd pages). The board can reside in any slot, and according to the book up to six can inhabit any one Apple, giving a possible total of 6Meg.

The one floppy provided is partitioned to carry all the files needed to get started with the various operating systems and really, anyone can get the whole thing up and running in less than five minutes.

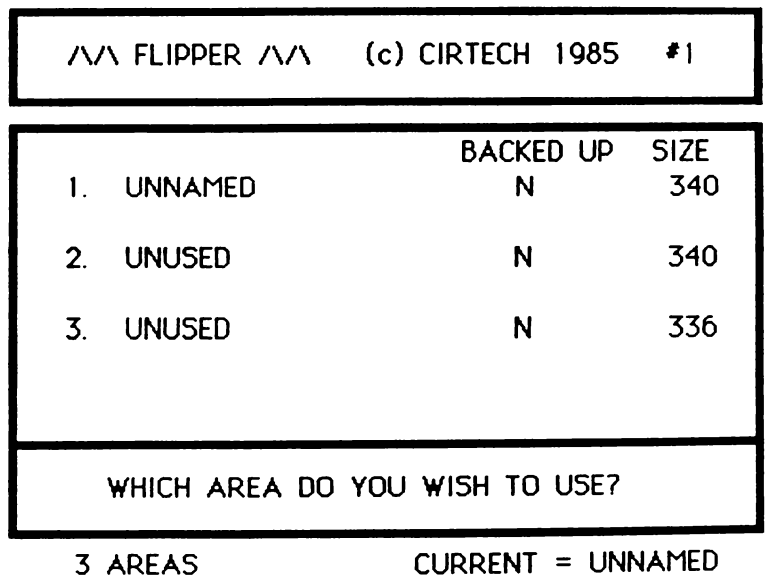
The "Program Manager" is one of the utilities on this disk, and it allows the card to be divided into a maximum four "work areas", each of which can contain different programs and more importantly, different operating systems.

Changing between operating systems and workareas is simple through the Program Manager menu, though this in itself is not the simplest function to access. Work stored in these areas remains intact until switching off power or disaster, whichever comes first.

Another aspect of the Program Manager gives the ability to quickly backup the work areas onto disk. If a disk is filled - as is quite probable when working in a 300K workarea - the system automatically divides the information and prompts for subsequent disks. Similarly, there is a fast restore.

I tried the system with DOS and CP/M and the card functioned according to spec. It really is a great feeling to sit behind the Apple and know there's more power under the hood than under the vast majority of PCs and ATs,. And, the ability to have both CP/M and DOS in memory and selectable is a treat for anyone who has had to keep two sets of program disks and sets of data disks, and needed to either run BOOT or switch off in order to change.

The card also does not appear to drain excessive amounts of power or generate too much heat. With the StarCard populated to only 64K, the power supply



of my Apple suffers. It's not that it fails, it's just that it becomes extremely warm and makes crackling sounds. Flipper produced no such complaints and this is in a packed Apple - 16K RAM, parallel printer, serial, Z80, 80 column and drive cards.

So, can the cost of $899 (that's $5,394 for the maximum 6Meg) be justified in any terms? I believe it could be for the convenience of more space in Appleworks alone. If using programs under CP/M with lots of .)VR files then again the cost could be recouped ultimately, in time saved waiting for the disk to do its job. For storage of data during long sessions, well, here is a person not well known for trust in RAM - better is the floppy.

As more applications become supported by these boards, their popularity can't help but spread - they give the IIs a serious edge in computing power. For the moment however, the cost may be prohibitive. After all, for only another $300 or so, one can purchase a //c, and save some time by spreading the work to someone else in the office.

FLIPPER can be used for several different purposes and in several different ways:

- You can run advanced application programs designed to directly take advantage of the extra memory (eg Appleworks 1.3 etc.)
- You can copy your existing programs (eg dBase, Appleworks etc) to Flipper, thus making them run much faster than if they were on floppy disks.
- You can use Flipper as a temporary data storage device to keep frequently used data instantly accessible.
- You can use the Program Manager to switch between several programs or data areas in Flipper, thus removing the need to reboot programs you use more than once a day.
- You can back up these areas onto floppy or Uni-disks and use these special backup disks to get the program started quickly the next day.

Learning to MacDraw with DrawArt

by Gareth Powell

MOST Macintosh users do not clearly understand the difference between *MacDraw* and *MacPaint*. The most important difference being that the two programs have totally different ways of recognising images which appear on the MacIntosh screen.

MacPaint produces images which are "bit mapped". That is they are held in the memory of the computer in precisely the same way as they appear on the screen, as a series of pixels that are either black or white, on or off.

In the *MacPaint* program there is a feature called Fat Bits which lets you see how the pixels are used to build a picture. It is as if you were looking into the atomic structure of the illustration.

You can see how any *MacPaint* illustration is built up of thousands of pixels, each of them either black or white.

MacDraw operates in a totally different way.

Shapes are stored in memory by their attributes.

For example, if you drew a circle in *MacPaint* in memory there would be a series of pixels which have been turned on. Whereas in *MacDraw* there is a statement that a circle of height X and width Y which is of a certain thickness of line and is filled with a particular pattern is in a specific position on the screen.

When a *MacPaint* document is printed, a series of instructions from the bit map is sent to the printer. It tells the printer when to put a dot and when to leave a space.

When the *MacDraw* document is printed the information about the circle is sent to the LaserWriter in the same form it is sent to the screen - and instructions as to where to place a preformed image. On any printer, even the ImageWriter, the resulting printout looks far better than anything you could produce with *MacPaint*.

The two illustrations which are included here show the difference.

These were produced during a desktop publishing seminar which I held recently and show very clearly how the single components when in *MacDraw* produce an infinitely clearer image than those within *MacPaint*.

Why then do we not all use *MacDraw* instead of *MacPaint*?

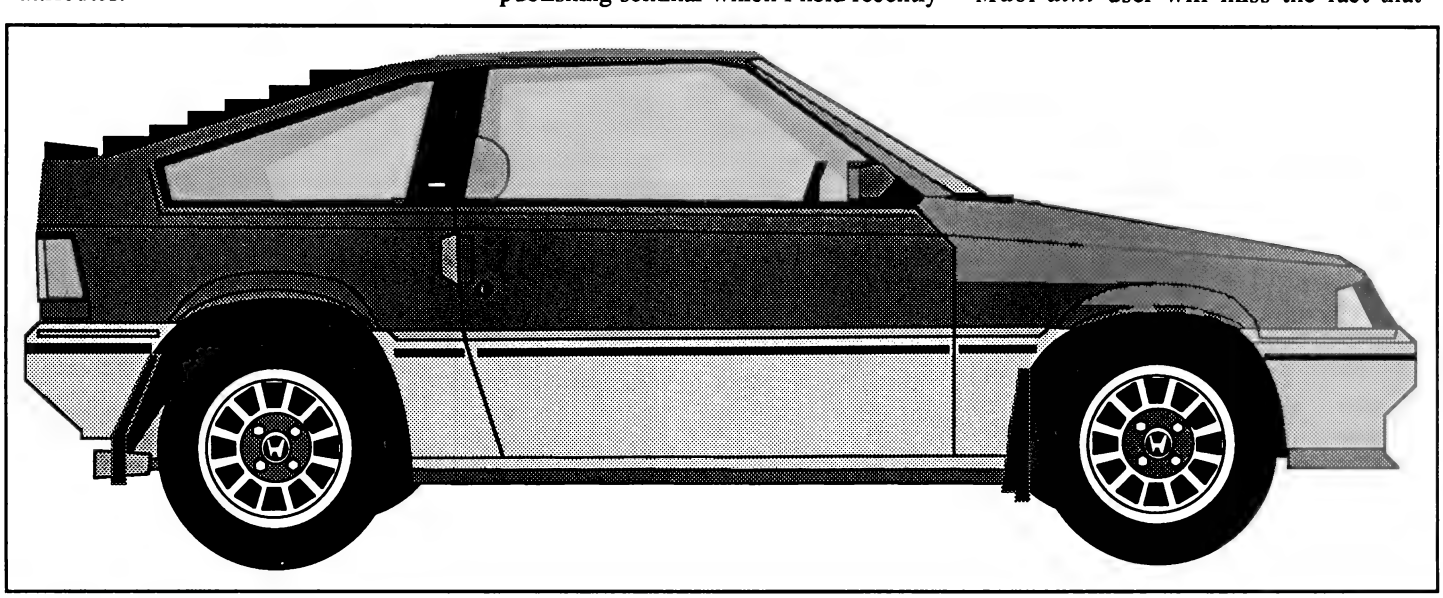
And why can't we all tap dance and whistle at the same time?

It is simply much easier and more convenient to use *MacPaint* which is a freehand drawing system than to use *MacDraw*. But the advantages of using *MacDraw* are far more than an improved image.

The amount of memory taken up on the disk by a complex *MacDraw* document is far smaller than that taken by *MacPaint* - the average is something around 4K. And it is possible to paste a *MacPaint* image into a *MacDraw*ing which gives you effectively the best of both worlds.

MacDraw however has still got certain problems.

The first is that it is infinitely less user friendly than *MacPaint*. The *MacPaint* user will miss the fact that



COMPUTER HAVEN

COMMUNICATIONS

Nice Modem RS232 Includes 300 baud, 1200 baud half duplex & 1200/75, Telecom approved with telephone, external power supply BELL & CCITT protocols.	$279.00
Hayes plug-in compatible 300 & 1200/75 with BELL & CCITT, auto-dial, & Viatel software.	$240.00
Viatel software Does baud rate conversion in software, supports telesoftware	$70.00

APPLE HARDWARE

Havenware 80 column card Features softswitching, inverse & Videx compatibility.	$93.60
Extended detachable keyboard	$179.00
Havenware Apple Fan $65	
Havenware IIe numeric keypad	$65.00
Havenware IIe extended 80 columns	$89.00
Autoice IIe extended 80 columns	$99.00
Multiram	call
65C02 accelerator card	call
Citech Flipper 1MEG memory card	$716.00
Grappler Plus printer interface	$56.00
Grappler Plus with buffer supplied with 16K buffer on board with cheap 32-64K upgrade option	$155.00
Havenware 16K language card	$78.00
Havenware PAL colour card	$78.00
SAM voice card Speech generation with software	$55.00
Taxan RGB card for II+/IIe	$170.00
Taxan RGB extended 80 column card	$ 385.00
Taxan RGB IIc	$216.00
Apple Chinnon disk drive II+/IIe Silent operation: direct drive	$225.00
Apple Chinnon disk drive IIc $269.00	
Switching power supply $120.00	

APPLE SOFTWARE

Turbo Pascal (requires CP/M card)	$88.80
Macwrite style word processor requires IIe or IIc 128K	$110.00
Plusworks Allows above but with RAM card support	$34.75
Plusworks XM As above but with RAM card support	$79.95
Plusworks XM RAM PAK Plusworks XM plus 128K memory upgrade	$179.00

MONITORS

Taxan Supervision III	$799.00
Thompson green	$210.00
Thompson amber	$210.00
Havenware monitors from:	$165.00

PRINTERS

Brother M1509 180cps & NLQ 15"	$799.00
Brother M1109 NLQ (LX80 & IBM graphics compatible)	$399.00
Brother M1109 NLQ for Apple IIc Includes cables!	$444.00
Star NX10 Other Star printers call	$489.00
Microline Okimate 20	$539.00
Olympia NP 165cps Epson compatible	$490.00

ACCESSORIES

Disk notcher	$12.00
8850 3.5" disk storage container	$28
Printer stand	$29.95

Prices subject to change without notice

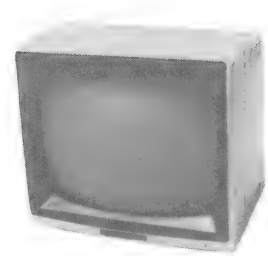
Even for the serious Apple user, computing is not always a straightforward business. When problems occur Computer Haven customers know they can trust us to get them on-line again. We have qualified technicians, experienced programmers, an expert technical team, and fast reliable service. More than just a PC discounter, Computer Haven service and support. For some very important people. Our customers.

Call us today.

Appleworks on the Apple II Plus

- Plusworks modifies your Appleworks start-up disk to run on an Apple II Plus $33.75
- Our de luxe Plusworks RAM PAK offers a 136K desktop, Pascal, CP/M and DOS 3.3, RAM disk support, two pass disk copying (subject to software), all on the Apple II Plus as well as IIe! $228.00

Havenware composite green or amber monitors $165.00



The Computer Haven Guarantee

With 20 YEARS OF CUSTOMER SERVICE behind us and five years micro experience, we know we're doing things right. Here are some of the benefits you receive:

o If you don't like any hardware product - for any reason - return it for a refund.

o Customers are automatically sent our computer generated price bulletin, The Printout, which includes thousands of computer products and hundreds of unbelievable specials on all types of computer equipment, and our industry newsletter that lets you keep tabs on new products, new versions, and market pricing.

o Contact us on Viatel and see our Viatel presentation on pages 248753* or contact us direct on 234923660*. If you have a 300 or 1200 baud modem you can log-on to our computer after business hours on our business number, and of course, you're welcome to come into our Sydney computer retail outlet at any time.

Phone and mail orders welcome. Please include $5 for postage and packing on most items. If using Visa, Mastercard or Bankcard, include the full number, name on the card, your signature and your expiry date. Most items shipped within 48 hours.

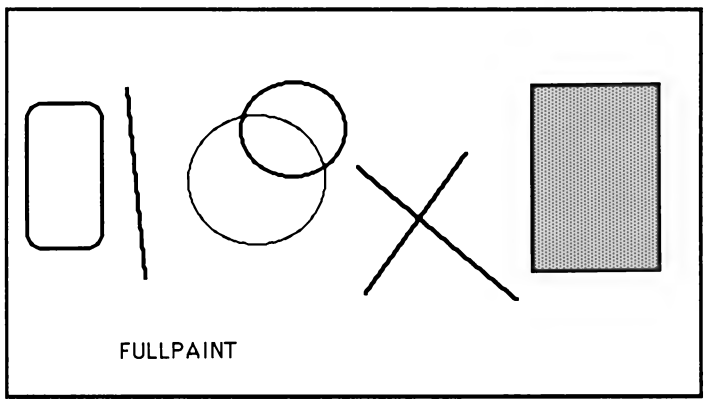
(02) 349 2366

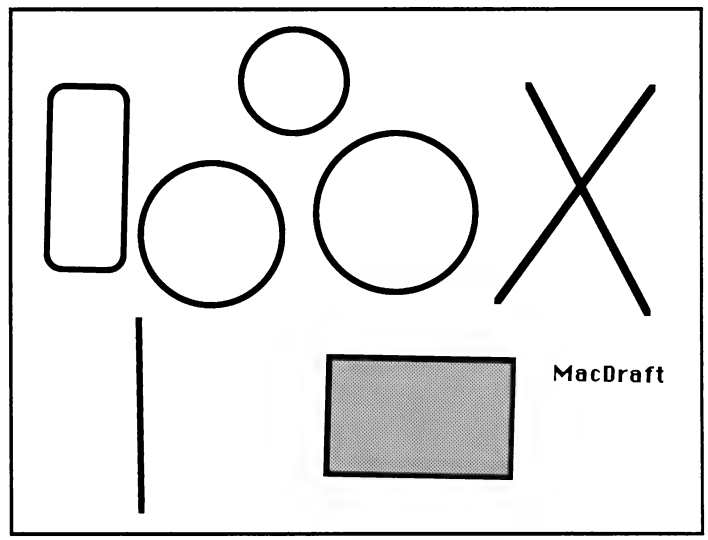
COMPUTER HAVEN

CONSULTANTS TO THE MICROCOMPUTER INDUSTRY

A division of
Malabar Trading Pty Ltd
Established since 1966

183 Maroubra Road,
Maroubra Junction,
N.S.W. 2035





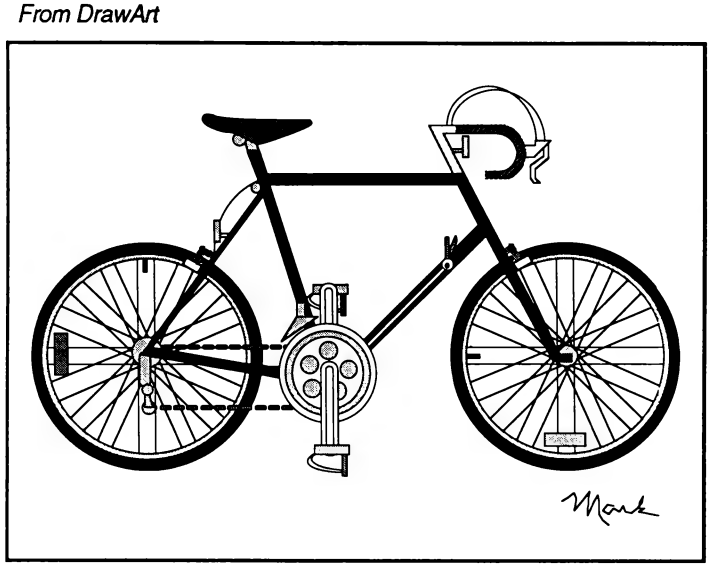
there is no eraser contained in *MacDraw*. This is because you are not dealing with a bit map image. Therefore you either have to wipe an illustration altogether or you have to draw over it in order to remove an offending part. This is not as difficult as it sounds, but there is no doubt that *MacDraw* comes across as a very technical program whereas *MacPaint* redefines the phrase 'user friendly'.

Having said that it is obvious that if you are serious about illustration, or if you are a publisher involved in desktop publishing, then it is vital that you master *MacDraw*.

To help you in this an American company called Desktop Graphics has produced a disk called *Draw Art* which is full of images produced using *MacDraw*. If I had to recommend to anyone how to get into using *MacDraw* I would suggest they get hold of this disk and play around with the images it makes available. It shows very clearly how much improved illustrations can be produced using *MacDraw*. And trying to duplicate one of these illustrations is the best way I know of learning how all the facilities of *MacDraw* operate.

Highly recommended.

From DrawArt



Mouse Busters - Comparisons
Macintizer and MacTablet

by Ken Longshaw

To compare the Macintizer with the MacTablet is an awkward task.

To all outward appearances the two are quite simply the different digitisers available from the market's opposing factions.

Physically, the difference is limited to outside dimensions and length of cables. The colour of both matches the Apple range, the software supported is identical, and the usefulness to a would-be buyer undeniable.

That is where any attempt at comparison must end. To see why, I had to take a careful look at the aims of the people who originally developed these Macintosh peripherals.

As far as ease of use is concerned, I would have to say (I wish I could have had you turning over a page here to heighten anticipation, but no) I have to say the two are as simple to operate as each other.

G.T.C.O.'s goal seems to have been to produce a better mouse trap, to provide the customer with a vastly superior instrument for manipulating the available software, for creating non conventional shaped objects that need a bit more subtle rendition than is achievable with a mouse. As their poster says - "Would you rather draw with a pencil or a lump of camembert cheese?" Undeniably they have achieved this worthy goal.

Their second prerequisite was to have a product with 100% compatibility to all Apple's range. By following strictly the guide lines Apple set for production of supportive peripheral equipment, this compatibility is a fact.

On the other hand the Summmagraphics gear took a different course with its objectives in the marketplace. These aims were, loosely speaking, to create a tool that would complement the mouse. I can quite readily see their point. For example, in our office, programs like *Pagemaker*, *Ready Set Go*, *Sidekick*, *Thinktank* and many more mouse driven programs are used to put our magazines together, and to be quite honest, using a pen to drive these instead of a mouse was a total non starter. To have to pick up a pen and write, then put it back down, watching it roll off the table, instead of just putting your hand over the mouse and moving it, took too much time. So the mouse gets a reprieve.

For anyone who expects lights and buzzers when they plug in a digitizer, a grave disappointment is in store. Summagraphics seems to have taken this into consideration. They have left the little rodent well alone and merely provide a tool that has 100% mouse capabilities, yet transcends what any mouse ever achieved. This is in the resolution available for use with the high resolution software, and in the future usefulness the MacTablet will prove to have.

Continuous updating of the software to make it more universal, more powerful and to guarantee compatibility with all Apple machines is an excellent indicator of Minicomp's devotion to their customers. Very soon they intend to make available a new 12 x 12 inch MacTablet available to people who want even more space to work with.

I think the end of the T.C.G versus Minicomp saga is not in sight. Look out for reviews on the book "How to be a MacArtist" in which I hope to see digitisers explored more fully.

So the choice is yours, after all it's your money. However may I suggest asking yourself these questions before making any final decision.

How far do I want to expand my graphics capabilities?
Do I intend making a serious effort to develop my freehand expertise ?

How big a tax deduction do I need?

I will be looking forward to hearing your feelings on these products in the forthcoming months.

For full review of these products, see the June issue of Australian Apple Review.

Epson became number one in printers because they listened to people in business and produced the products they needed. Products like the EX800 that sets new standards in dot matrix printing.

The result of our homework.

Epson's new EX800 offers up to 300cps in draft mode, bi-directional printing of both text and graphics and has an 8K buffer. There are two NLQ fonts, convenient paper handling, serial and parallel interfacing and IBM graphics capability. For the future, upgradability is central to Epson's thinking. And for peace of mind, there's Epson's 12 month warranty.

Epson, your first choice.

Epson became number one in printers because they are extremely hard to beat for features, reliability and value. The new EX800, however, goes one better. It sets standards in dot matrix printing that have no equal. If you're in a fast moving business, you owe it to yourself to see this pearl of a printer soon. For your nearest Epson dealer, phone Sydney (02) 452 5222; Melbourne (03) 543 6455; Brisbane (07) 832 5400; Adelaide (08) 332 8501; Perth (09) 322 1896 or Darwin (089) 81 4755.

EPSON®

EPS 0111

CurvePlotter!

by Gene Stephan

Program: Curve Plotter
Requirements: DOS 3.3
From: Spectral Graphics Software
Cost: $78.95 (inc postage)

In the October 1985 issue of the Australian Apple Review, I looked at a program called *MasterChart!*. My finding was that it was one of the best graphics (charts and plots) packages I had seen in terms of price, functionality and ability to be modified.

While *CurvePlotter!* does not live up to all the standards set by the earlier program, it does have some very good features, and is worth considering if your needs involve graphics presentations.

The program basically generates three different kinds of graphs. These are:

1. line - join points or 'best fit'
2. area - multiple data sets (3 maximum)
3. curve - by math function

If there is one major weakness, it is there in the points above. The program just doesn't do quite enough. Fitting curves to data was what was expected, but this is out of the scope of the program. While on the question of negatives, the other two problems I found were the Manual, and the speed of execution.

The manual is skimpy. I am not a great proponent of the massive manual, but it would have been nice to describe the capabilities of the package, give some examples and suggest some code level modifications. This is missing, in the six odd pages of text, although an extensive menu system drives all the basic operations.

The problem with speed is a two-edged one. If your programs are in Basic and unprotected, then they are easy to modify, streamline, whatever. The price for this convenience is that they become slow. Graphics packages such as CurvePlotter!, which have to massage data, scale and then draw, can become unbearable with large numbers of data points. OK, so you can go and have a cup of coffee - but be aware of this.

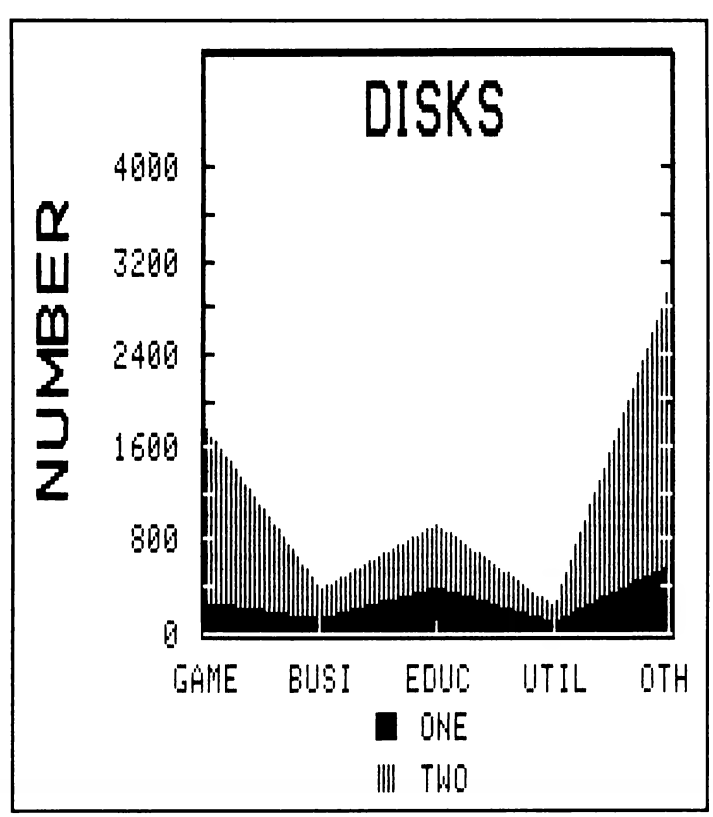
This brings me to the good points and there certainly are a lot of these. The first is that the disk is unprotected. You can backup the disk and then play with the programs if you so desire. Locksmith etc. are unnecessary, COPYA is all that's required.

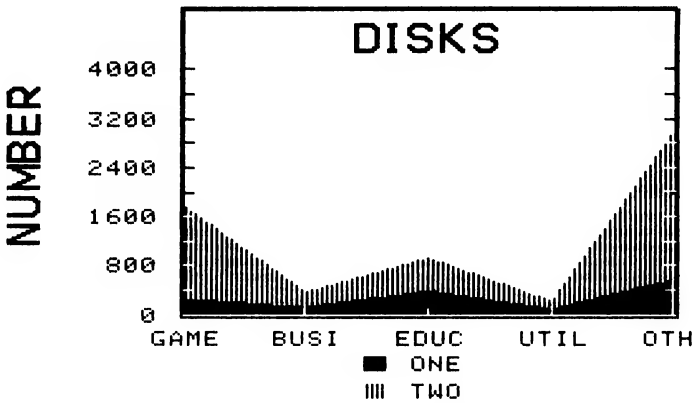
The next good point is that the program is easy to use. A novice can sit down and enter data in a few minutes - you can read the manual in half that time. And, while it could be annoying that data sets are automtically saved each time the data entry/edit screen is exited, it does ensure that someone unfamiliar with the system will not accidentally leave without saving. If it is too infuriating, get into the Basic and delete/modify the line.

But the best feature of the package is the support of printers and interface boards.

About 40 printers and 60 interfaces are listed, and on the first run through, the menu prompts you to select from the lists. The high degree of support, for example the graphics shown were generated on a Super 5 (Epson/IBM compatible) with a Grappler +, means that if you have some exotic configuration, there is a reasonable chance it may be supported just as well as the stock-standard.

From the print menu, it becomes easy to select the hardcopy sizes and shapes of charts using the graphics created on the screen. The area graphics shown were selected at 1 X horizontal, 1 X vertical and 1 X horizontal, 2 X vertical

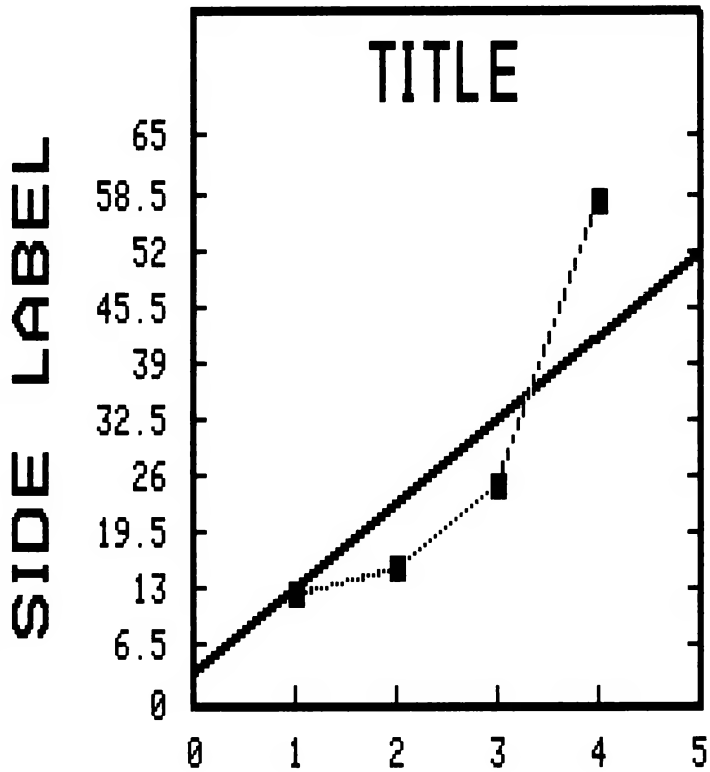




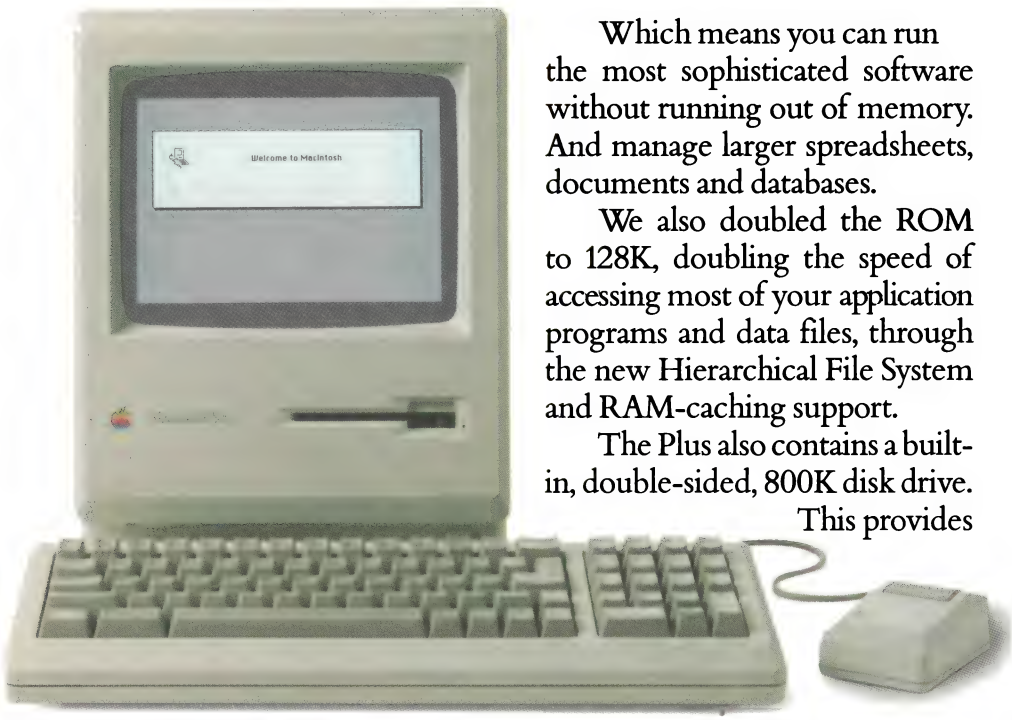
respectively. Maximum size incidentally is 9 x 9. Further, rotation and darkness are also menu selectable as are several other parameters.

The graphics are stored to disk with the standard 34 sector binary save, allowing them to be re-worked by other packages (such as *MasterChart!*), the frills added and then printed.

On the whole, I did expect more from *CurvePlotter!*. It did not flow as smoothly as I would have liked for a graphics package and it did have some annoyances. However, it did have quite a number of redeeming features - features which would be attractive for the user prepared to modify to suit the need or the new user. One thing which cannot be taken away from the program is that it is very, very easy to use.



New Macintosh Plus. We've added



This year Apple introduces a new Macintosh.

Macintosh Plus.

As the name suggests, it's evolutionary, rather than revolutionary

(It's not our policy to bring out totally new computers for the sake of it. Instead we strive to perfect existing ones.)

Macintosh Plus is as simple to learn and use as before.

But there are some big differences, encouraged, we don't mind admitting, by current Macintosh owners.

Some of you asked for more power, others speed. Some needed greater storage capacity, others expandability.

Some heavy number-crunchers wanted a numeric key pad and conventional cursor keys built into the keyboard rather than remote.

Done. Done. And done.

The pluses of this new Macintosh include a full megabyte of RAM (expandable to four megabytes).

Which means you can run the most sophisticated software without running out of memory. And manage larger spreadsheets, documents and databases.

We also doubled the ROM to 128K, doubling the speed of accessing most of your application programs and data files, through the new Hierarchical File System and RAM-caching support.

The Plus also contains a built-in, double-sided, 800K disk drive. This provides twice the capacity of the previous Macintosh and the equivalent of 400 typed pages, or a bulging file drawer.

If that's still not enough, you can always plug in another 800K external drive.

Or you can really go all out and add our new Hard Disk 20.

(Its 20 megabytes are about 10,000 pages worth.)

Just plug in a Macintosh Hard Disk 20 and you can keep all your software, files, worksheets and documents within a moment's notice of your screen.

Add the Apple program Switcher, and you can actually work with several applications at once, moving information from one into another with the greatest of ease.

So you can transfer notes from an outline to a report – or numbers from a data file to a spreadsheet – as fast as you can click your mouse.

AppleCare.

All Apple products come with an automatic 3-month warranty covering all parts and labour.

But this year, Apple introduced a sort of "Warranty Plus" through the AppleCare service programme.

If you fill out and mail to us the registration form enclosed with your equipment, you will receive nine extra months' cover on top of the normal three.

Macintosh Plus also features a new SCSI connection port (dubbed "Scuzzy" in typical fashion by the development team).

SCSI stands for Small Computer Systems Interface and it's an industry standard.

We've virtually opened up the architecture. But what we've really done, of course, is open up a whole new world of possibilities.

The Scuzzy port let's you daisy-chain up to seven high-performance (and often low-priced) peripherals like hard disks, file servers and tape backups from all sorts of third parties.

Given all this power, it made sense to team it with equally impressive printers.

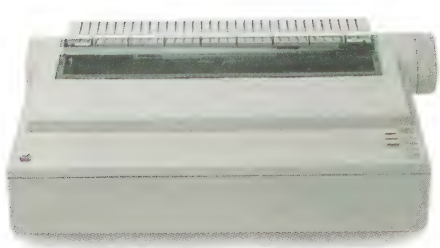
The new LaserWriter Plus is just such, producing documents with text and graphics of publishing quality.

everything except complications.

And it maintains this fidelity on copy paper, letterhead, labels, envelopes or overhead transparencies.

LaserWriter Plus has 35 different typefaces built in, a choice that would embarrass your local printer (and his invoices).

But if you don't need publication-quality printing, you can have near letter-quality by teaming up your Macintosh with the ImageWriter II.



It prints in three different modes: high-quality, standard and draft. And churns it out at speeds of up to 2½ pages per minute.

You can feed in single sheets automatically with the optional SheetFeeder.

And print up to seven colours using appropriate software.

ImageWriter II can also be shared with other Macintosh users via AppleTalk.

But this Macintosh isn't called Plus for nothing. You can just add and add.

Items like an AppleTalk Personal Network.

It's the most flexible, low-cost, easy-to-set-up, easy-to-use network around.

It'll connect up an office full of Macintoshes, LaserWriters, ImageWriters and file and disk servers – 32 devices in all.

Using an electronic mail package, you can send messages to any Macintosh screen on the network.

Or with EtherMac software you can share information with other computers. (Our computer is so friendly it'll even talk to IBMs.)

Add an Apple Modem 1200 to your Macintosh and you can talk to anyone virtually anywhere.

With a communications program like MacTerminal, a standard telephone and an Apple modem, your Macintosh can plug into electronic information services like Viatel, Minerva and Midas and communicate with mainframes and minicomputers.

If you already own a Macintosh, there's another plus.

You can upgrade your machine to the new one megabyte. Ask your dealer for upgrade details.

You can also upgrade your LaserWriter to become a LaserWriter Plus.

Get hands-on with the new Macintosh Plus.

You should like it.

You helped design it.

The Apple business card.

If you wish to own a Macintosh system, you can take advantage of the Apple Credit Card, available from participating dealers.

You can use it to purchase computers, peripheral equipment and software with no down-payment and less impact on your cash flow.

If you qualify, in most cases you can take your own Macintosh with you and dive straight into work with it the same day.

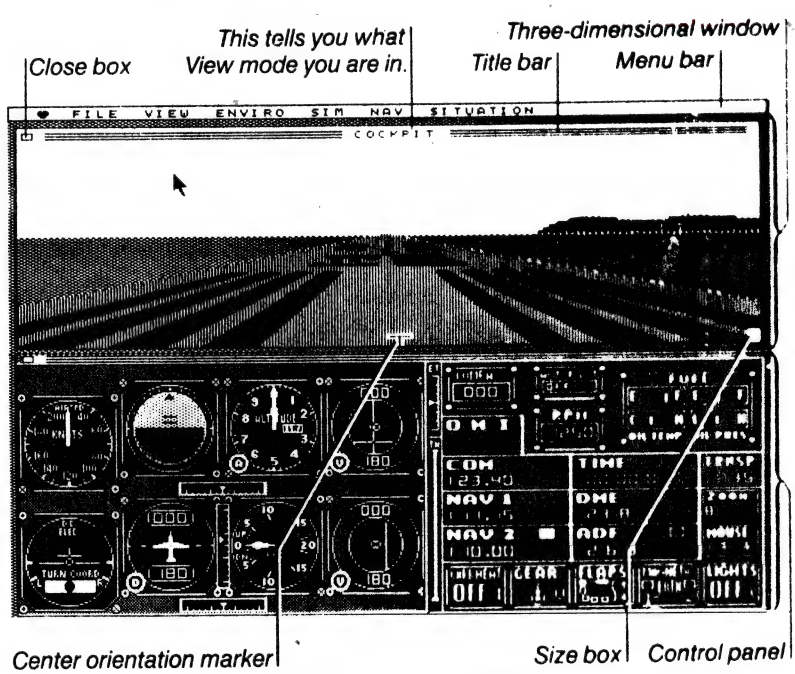
For an authorised Apple dealer near you outside Sydney, you call toll-free (008) 22 1555 or Sydney 908 9088. AP 219/Palace

Apple

Flight Simulator

by J.Mark Hunter

The light drizzle that had started slamming the cockpit windows an hour and forty minutes ago over the Oregon/California border now turns into a fierce onslaught of pelting wet bullets, smashing violently against the steel shell of the aircraft. The skies have shadowed into an ominous charcoal haze, looming treacherously, making the afternoon time of 4:00 seem like the other side of midnight.



Outside and below, the tarmac gleams from the lights of the terminal. The saturated attack of the heavens forces the employees of the Oakland International Airport to scurry faster, diving about under the hulls of aircraft and in and out of buildings, the air transport system never stopping, especially not for the rain.

The Gates Learjet 25G class now stands parked near the wall of a fuel tower with a rubber hose 12cm in diameter protruding from its side. From a distance it looks like a giant metal mosquito, motionless, inactive, secretly draining blood from its unknowing victim.

Half an hour later, you are given clearance for take-off, and position the jet onto runway 27. A few feet behind you, your passengers, the president of aSeattle-based mining company, his executives and friends, lock themselves behind their seatbelts and stare out the window at the unfriendly weather. The holiday banter has dissipated into the air of the pressurized cabin, and a veil of disquiet enshrouds each one. The President mutters something about how different it's going to be in Hawaii, but everyone remains nervous, willing to accept even worse weather than this on the islands if only they are allowed to get there now, alive.

The powerful twin General Electric CJ610-8A turbojet engines rocket the swift and sturdy craft down the runway amidst the cracks of hostile, brilliant thunderbolts and lift you from the ground. Climbing, climbing, a smooth gradient of ascent, as thousands of feet melt away underneath the white belly of the plane.

Suddenly a powerfully turbulent pocket of air grabs hold of the nose of the small jet, and in an aggressive tangle of wills you wrestle the controls against the ugliest of nature's moods. The jet seismically reverberates as you pull the throttle up to full power and the wondrous bird surges into the sky.

Out of danger now, you level her out to 38,000 feet and a speed of 410 knots.

The lights of San Francisco and the California coast quickly fade as you hurtle westward into the setting sun. Behind you, your anxious passengers sigh as one.

Welcome aboard Microsoft's bestselling computer game, *Flight Simulator*, now gratefully extended to Apple Airways.

Relaxing now, they reach for a drink, and even begin to feel hungry.

Bruce Artwick simulated the driving, I'm just setting the scene.

Welcome aboard Microsoft's bestselling computer game, *Flight Simulator*, now gratefully extended to Apple Airways.

Flight Simulator is a second generation, real-time flight simulation program that pilots of all ages and levels of experience will enjoy. The simulation considers 39 important aircraft characteristics and includes an out-the-window three-dimensional dynamic flight display, extensive flight controls, and minimum Visual Flight Rules (VFR) and Instrument Flight Rules (IFR) instrumentation as specified by the Federal Aviation Administration (FAA).

Unlike first generation simulators, Flight Simulator features detailed graphics that closely emulate a pilot's actual perspective. Scenery is realistic and instruments look and behave like the real thing. *Flight Simulator*'s "world" is more than 10,000 by 10,000 miles square with a resolution of about one one-hundreth of an inch.

The world encompasses the entire continental United States and extends into Canada, Mexico, and the Caribbean. The "populated" world consists of five areas and includes 118 airports. Winds, clouds, time of day (for dawn, day, dusk and night flight), and navigation aids are also included.

Added features make *Flight Simulator*'s aircraft more difficult to fly than first-generation simulators, so as a convenience to new pilots, varying degrees of difficulty are provided. If you have never flown before, you can use the easiest flight mode to learn the fundamentals of flight control. In this mode you fly in optimal conditions using only the primary flight instruments and controls. When you have mastered the basics of flight, or if you are already a seasoned pilot, you can select harder modes to simulate sophisticated flight factors.

In all modes, except the WWI Ace mode, you can control environmental conditions such as wind, time of day and turbulence. You can also set a reliability factor that determines the frequency with which flight problems arise. You can begin or resume flight from a series of interesting prerecorded flight situations, and even set up and save your own.

The game simulates two types of aircraft: a single-engine, high performance, propeller-driven aircraft of the Cessna 182 class, and a business jet as outlined above. The Cessna 182 type single-engine prop aircraft is an ideal plane for pilot training because it has climb performance and a speed that keeps the pilot busy, especially on landing approach. The plane is slightly superior to an advanced World War I fighter. This aircraft's simulation is designed for realism and presents the feeling of flying a real-life situation.

The business jet simulation is designed more for fun than realism. The aircraft is easy to fly, aerobatic, and lets you see what it is like to fly at 450 knots and a height of 45,000 feet altitude.

Flight Simulator can provide hours of rewarding entertainment, and in addition to prop and jet modes includes the World War I Ace war game, which lets you test your dogfighting and bombing skills.

The credentials of the designers of Flight Simulator are more than adequate.

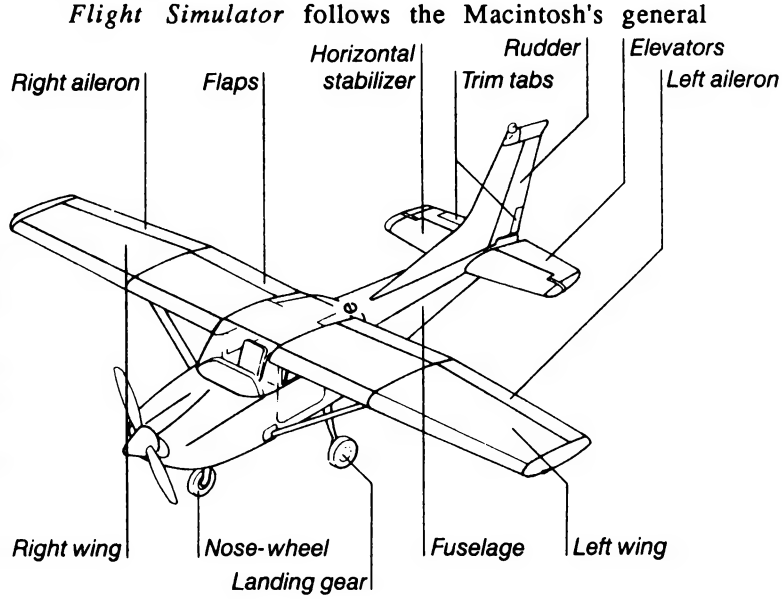
It was written by Bruce A. Artwick, President of Sublogic Corporation, Champaign, Illinois, a hardware and software firm specializing in high performance graphics systems. Artwick gained extensive experience in high performance signal processor architecture design and microcomputer-based radar control systems at Hughes Aircraft Company. In addition, he has researched minicomputer- and microcomputer-based graphic system designed at the Aviation Research Laboratory and Digital Computer Laboratories, University of Illinois, where he received a B.S. and M.S. in electrical engineering.

Paul Travis wrote *Flight Simulator*'s interfaces to the Macintosh disk, mouse, and toolbox routines. Mike Kulas wrote various gauge, graphics, and simulation software. Both Travis and Kulas are staff engineers at Sublogic Corporation.

As the game begins, (and we logically hold it to that category, because in no way does mastery of the controls entitle you to a pilot's license), and you are now in flight, there are of course many functions that you must learn to coordinate and displays to familiarize yourself with.

In *Flight Simulator*, more than one window can be active at a time. The three-dimensional control panel and map display windows, for example, can all be active at once. They do not overlap one another as in conventional screen displays, but instead "tile", so that if you open a window so far that it begins to overlap another, the other window pushes the border back to avoid overlap.

Flight Simulator follows the Macintosh's general



philosophy of window, pointer and mouse interaction. In addition to using the mouse as a pointer, you can use it as your aircraft's control yoke.

The three-dimensional window usually occupies the top half of the display screen, and provides several views either out of your windshield, from a spotter plane, or from the control tower, depending on what you select. The title bar above the 3-D window shows the View mode you are in, and through it you can see the runway, terrain and horizon.

The visual effects of the *Flight Simulator* program are very natural. Solidly shaded surfaces give the feeling of depth and substance. Cloudy days bring dark visibility-obscure heavens until you break away from the masses and reach clear sky. And at night, lights on the ground are your only visual reference.

Instruments on the panel and radios in the stack window (or standard instrument cluster) are arranged as they would be on most aircraft.

Flight Simulator really is a learning experience. Most every facet of flight control is taken into consideration and compels you test your skills and reasoning ability.

Everything from flaps to flare are required knowledge. You get to know that carburettor heat is used to prevent icing or clear ice that has already formed in the carburettor and the OBI is used with the NAV to tune into the ADF/VOR selector. On occasion the ATC (Air Traffic Control) will ask you to transmit a four-digit code or "squawk" and you've got to know how to answer 'cause they know if you're jiving them or not.

Remember too, that in landing a Learjet you just don't pull up to the curb, but serious steps have to be measured in total accuracy in using landing gear, setting the rudder on course, reducing airspeed, rate of sink, powerglides and runway alignment.

The manual for Flight Simulator is exceptionally complete and easy to read. The layout for the step by step chapters is excellent and very teachable. I'm more than impressed by the seemingly limitless possibilities of the program, offering a wealth of challenging, serious play.

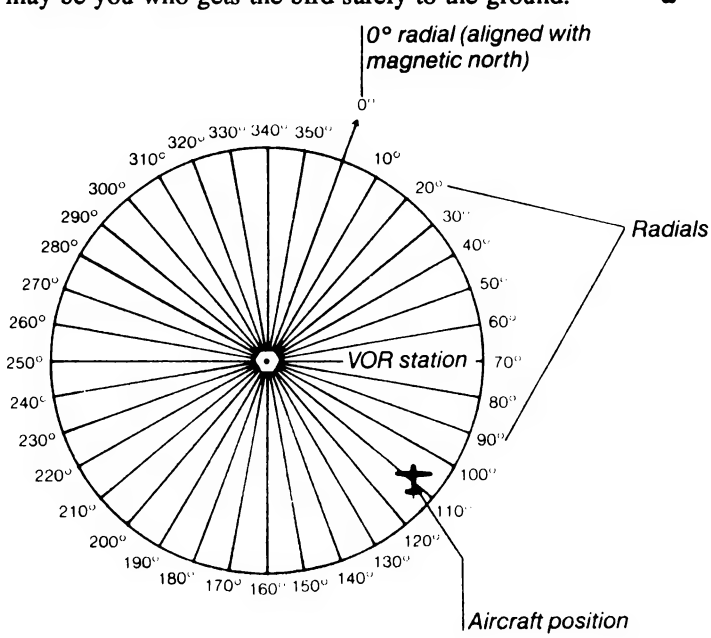
The writers and designers have basically included all the necessary functional movements of aircraft control but streamlined the whole game with quality interest sidelines. Along with the thrill of soaring at the speed of sound through the skies ever higher and higher until you reach your own empyrean, or drifting back and gently floating with the regular cloud nine commuters, you are simultaneously learning the technicalities of navigation and flight path geography. You're given countless opportunities of exploration, whether it be flying over the cacti-studded plains of Colorado or zipping around the magnificent twin towers of the World Trade Center in New York City.

Why *Flight Simulator* stands alone - It's like choosing a particular class in high school not only because of your interest in the subject but because the teacher is so great. You'll learn something, but at the same time he's going to make it fun and compel you to take an interest in what's taught. That's what *Flight Simulator* is all about.

If you want to invest in something that's not going to make your brain soggy and make you feel terrible about all the precious time you wasted, then it's time you took on *Flight Simulator*.

You'll sure be glad you did.

And the next time you're flying out of Frisco and the pilot picks that time to have a cardiac, then who knows - it just may be you who gets the bird safely to the ground.

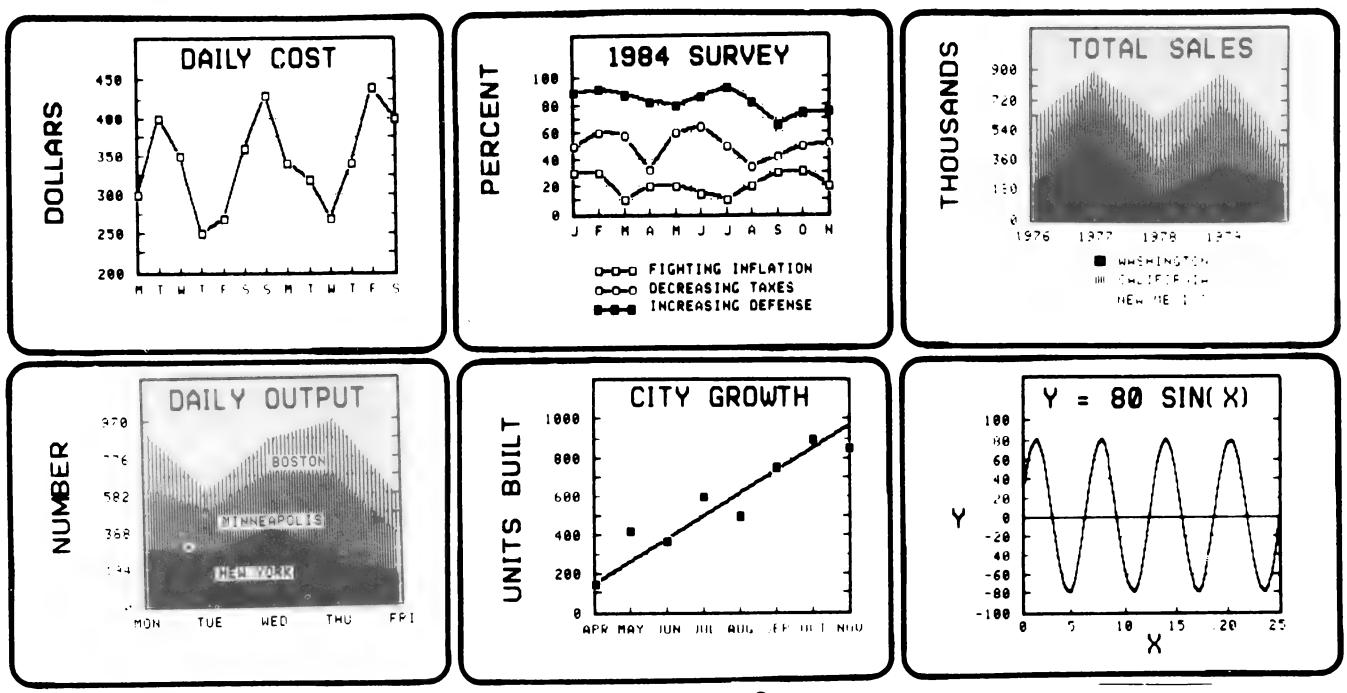


SPECTRAL GRAPHICS SOFTWARE

P.O. BOX 134,
BEENLEIGH, QLD 4207
PHONE: (07) 287 5010

CurvePlotter!

TO ALL APPLE II+, IIE & IIC OWNERS



For APPLE II+, IIe, IIc and APPLE compatibles.
CurvePlotter! is an extremely sophisticated chart program. It plots line charts, area charts, best fit trend charts and mathematical functions.
Up to 100 keyboard-entered data points may be entered, stored on disk and plotted on screen or printer. Data may be edited at any time. All labelling and scaling is automatic or user-defined.
The LINE CHART, AREA CHART and TREND CHART programs permit numerical entry versus month, year, day or any other horizontal label the user wishes. These programs also permit entry of x-y numerical pairs, which is perfectly suited for scientific work.
The TREND CHART program is an indispensable business and scientific tool. It finds the "Line of Best Fit" to a set of data, and then draws the best straight line among the data.
Also on the **CurvePlotter!** disk is our unsurpassed SCIENCE/MATH CHART program. Just type in any mathematical function you can think of this and this program will plot it.
CurvePlotter! also comes with a Graphics Print Routine that works with 47 different printers and 63 different types of printer interface cards. Including Auto-Ice, Apple Super Serial cards and the Apple Imagewriter printer.

No more Printing Problems!

Please complete and return to

SPECTRAL GRAPHICS SOFTWARE,
P.O. BOX 134
BEENLEIGH, QLD. 4207

Name: _____

Address: _____

_____

State: _____

Postcode: _____

I enclose my cheque / money order for $78.95. (inc. post. & handling)

If not completely satisfied, CurvePlotter! comes with a (30) day unconditional money back guarantee.

Educating the Apple

by Lynne Ryder

Program: **Algebra 1-6**
By: **EDUware**
Requires: **Apple II,II+ 48K; DOS 3.3**
Apple IIe, c 48K

This is the first in a set of six disks of an algebra course for Year 7 students. Each of the disks covers a different set of units, Set 1 being by far the easiest, and the range continuing to cover the more advanced concepts of algebra such as linear and quadratic equations, roots and irrational numbers. However, it's Disk 1 that is for review, and this looks at the following five major areas:

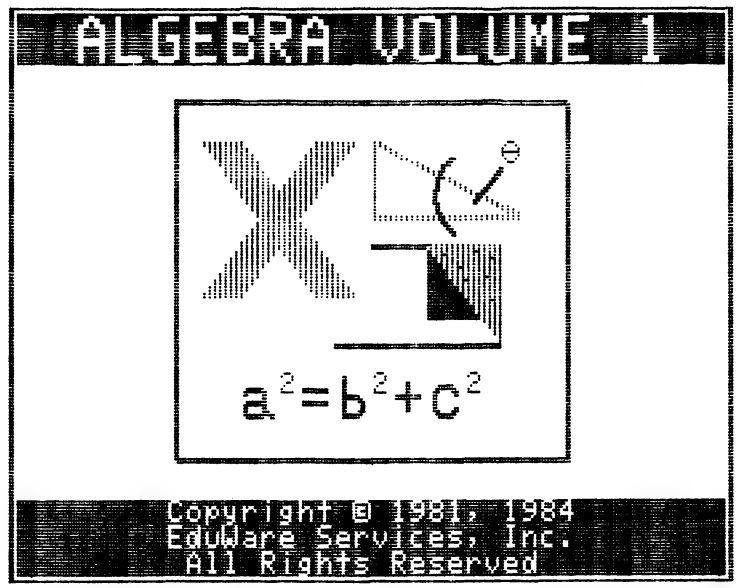
Definitions
Number Line Operations
Sets
Evaluating Expressions
Rules for Reducing Equations

Each of these areas follows the same format. A brief explanatory screen or two, followed by some practice and then a test. Sound familiar? At the end of the practice there is also a final test with the computer determining which areas need to be revised and which are adequate.

I will look at each of the units in a little more detail.

Unit 1. DEFINITIONS: This takes into account Numerals, Operations, Grouping Symbols, Equality and Inequality and the inevitable tests. I say 'inevitable' because so much education software these days believes in testing rather than teaching. Yet here is a prime example of where some simple concepts could have been reinforced through more emphasis on screens with explanation and some step-by-step solution rather than an emphasis on clear cut right and wrong.

In the test section, the student is immediately made aware if the answer is right or wrong. If the answer is right - well, so it should be. If the answer is wrong, then the correct answer appears. There is no coaching or showing how the answer was arrived at by the program. While this may appear trivial at this level, still, it must be remembered that this is disk 1 of a series.



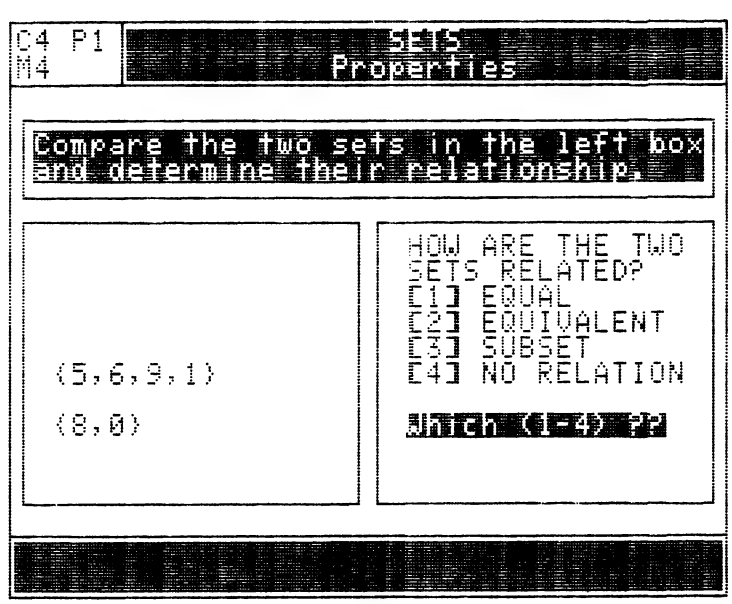
An annoying point which manifested itself very early in the exercise was the symbol for multiplication. Here it was created over a height of three lines, an eyesore at best, and why couldn't they use the standard 'x'?

Passing the test at the end allows the student to graduate to the next level.

Unit 2. NUMBER LINES OPERATIONS: Concepts covered in this unit include the number line, giving a definition of what a number line is, co-ordinates of points, the origin, unit length, etc, leading to the concepts of real numbers.

Practice is given on the number line and in operations with positive and negative numbers.

Unit 3. SETS: the concepts presented in this unit include elements and non elements, number systems, and the properties of



sets. Perhaps in explanation I found this unit quite reasonable, with the use of brackets and how to formally write a set being well shown.

Practice covers the determination of sets and sub sets, and union and intersection.

Unit 4. EVALUATING EXPRESSIONS: The concepts covered in this unit include variables, constants, factors and coefficients, and exponents.

Unit 5. RULES FOR REDUCING EQUATIONS, completes the unit by going through the rules for reducing expression such as the combining of like terms, and gives some practice in these operations.

Although there were some irritations with this offering, on the whole I thought Algebra 1 did have some redeeming factors which would make it a worthwhile additional activity when teaching the topic, or for home study.

Summing up the good points:

1. The program is easy to use even by students not au fait with the Apple - each section is menu driven.
2. It is relatively easy to return to the definition screen.
3. In the class room the recorded scores can be looked at later without disruption from the post test disk.
4. Even in such a limited set of units, identification of problem areas can be easily done and this, if we can believe all we read, can be further tested by the 'Comprehensive Post-Test Disk', available separately.

And some general weak points:

1. While the IBM version is not copy protected, or at least does not appear to be from the multi-system manual provided, the Apple version is. Does this cast some sort of stigma over Apple users? Certainly it is annoying for legitimate backup, though schools are privileged, and can order one backup.
2. To obtain the complete set could be expensive.
3. The grading within each area could have been a little better - after all, not all students learn or practice at the same pace.

After playing with the disk and going through the exercises, the final feeling was that Algebra 1 is quite a reasonable program and probably anyone looking for such software will not regret the purchase.

Lotus Jazz. Integrated word processing, business graphics, database management, data communications and worksheet.

Microsoft Chart. 42 different charts and graphs for presentations, sales reports and transparencies.

MacBusiness. Gain overall financial control of your small business with this integrated, intuitive accounting program.

Omnis 3 by Blyth Software. Single or multi-user data base manager featuring multiple file management and user definable menus.

PFS: File. Store and retrieve mailing lists, client records, collections, schedules and inventories.

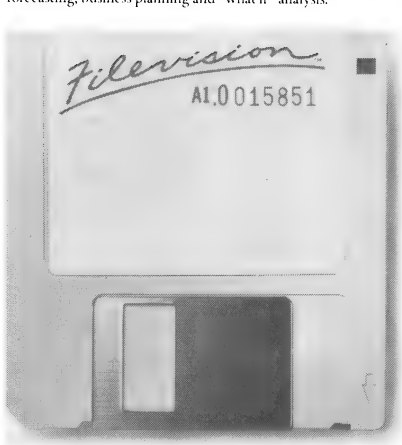
MacProject. Create complex "critical path" flow charts for production schedules, timelines and managing projects.

ThinkTank 512. An idea processor to organise projects, manage details, outline ideas and support decisions.

Microsoft Multiplan. Electronic spreadsheet for budget forecasting, business planning and "what if" analysis.

PageMaker by Aldus. Design newsletters, brochures, training manuals, presentations and more.

Microsoft Word. Full feature word processor for memos, personalised form letters, reports or any professional document.



Filevision. Visualise market trends, organise and track sales and present data in pictures.

MacVideotex. Access stock market, home banking, travel and other information via Telecom's Viatel videotex service.

AP 177/Palace/L.

WORKAHOLICS REJOICE. NOW YOU CAN DO EVERYBODY'S JOB.

There are now more than 550 software programs available for the Macintosh computer.

Many of them wholly and solely devoted to making your working life more productive.

And there are hundreds more in the pipeline.

There are word processing programs with different typestyles and sizes that make reports and memos more memorable.

(Particularly when they're printed on our new LaserWriter printer, which produces publication-quality text and graphics.)

Data management programs that incorporate graphics to make your data even more manageable.

Spreadsheets that help you forecast, budget and analyse. Without sending you to an analyst.

Business graphics programs that turn rows and rows of numbers nobody understands into charts and graphics everybody understands.

Data communications programs that put a world of information – like stock quotes, yesterday's sales and today's business news – right at your fingertip.

Along with programs that no other office computer system can touch.

Like Microsoft Word, Living Videotext's ThinkTank 512, Omnis 3 by Blyth Software and the just-released Jazz from Lotus.

And our own MacProject, which creates sophisticated "critical path" charts that threaten to put common status reports on the endangered species list.

But more impressive than the sheer number of programs for the Macintosh is the sheer ease with which you can use them.

Thanks to Macintosh's windows, icons, pull-down menus and mouse technology, every Macintosh program works the same way. Learn one, and you've learned them all.

Which means not only will you have more time to do your job, but everyone else's job too.

(We said we'd make you more productive, we never said more popular.)

Apple

For the authorised dealer nearest you, outside Sydney call toll-free (008) 221555, or Sydney 908 9088. Apple Credit Card, available at participating dealers to approved customers.

AP 177/Palace/R.A

Byte Bashers & Hex Hackers

A useful programming utility from Errol Chopping

If you are into programming in Applesoft BASIC then read on.

It has become almost an industry standard in Apple software that one uses the Arrow Keys to highlight menu options and then the Return key to activate the selected option. Also, the ESC key has become the standard method for cancelling an activity or going back to a previous section of the program.

It would be nice if this technique could be extended to reading filenames from a disk directory so that a file coud be loaded onto memory without actually typing its name. Those of you who have used Appleworks will recognise this system. If you "Add files to the desktop - from the current disk" then Appleworks presents you with a list of files on the disk and you use the arrows and return key to pick up the file you want. Note also that Appleworks only displays files that have been created with the Appleworks program - text, binary, system etc. files are filtered out of the display.

The short program presented here allows you to do the same thing in your own BASIC programs. Note: the program will only work under ProDos in 80 columns, not DOS 3.3.

```
10 REM program pick a file

20 REM variables
30 KB=-16384:SB=-16368: REM
keyboard memory locations
40 DIM F$(100): REM room for 100
filenames
50 PF$="":REM current prodos prefix
60 A$="": REM each line of catalog
display
70 I=O:P=O: REM counters
```

That gets all the variables defined ... now the work starts.

```
75 PR#3: REM start 80 column
display
80 PRINT "insert the disk to be read in
disk drive 1 and press a key"
90 WAIT KB, 128: POKE SB, 0
100 ONERR GOTO 170:REM ready
for the end of the file
110 PRINT CHR$(4)"PREFIX, D1"
120 PRINT CHR$(4)"PREFIX":
INPUT PF$
```

Lines 110-120 change the current prefix to the name of the disk in drive 1. This will be the name of the volume directory (catalog) from which we will read the filenames.

```
130 PRINT
CHR$(4)"OPEN";PF$;",TDIR"
140 PRINT CHR$(4)"READ";PF$
```

Lines 130-140 open and read the disk directory in the same way as a sequential text file is opened and read. The contents of this directory file are the same as you would see if you CATALOG a disk. This feature is only available in ProDos and is what makes the whole process easy.

```
150 INPUT A$:IF
MID$(A$,18.3)="TXT" THEN
N=N+1:F$(N)=A$
160 GOTO 150
170 PRINT CHR$(4)"CLOSE":POKE
216,0
```

The 3 characters at position 18 on each line in the directory file indicate the filetype. Lines 150-160 read each line in A$, check if a TEXT file has been found and if so store the whole line as the next element of the array F$(). You could change the TXT in line 150 to whatever type of file you wish to read. Line 170 closes the file and switches off the onerr trap set in line 100.

We now have the array F$() filled with N directory lines and each one contains all the information about each TEXT file on the disk.

Now let's display the filenames on the screen and select one with the arrows...

```
180 HOME
190 PRINT "Select with the arrows,
then press return. Press ESC to cancel"
200 POKE 34,4: POKE 35,20
210 PRINT
220 FOR I = 1 to 15
230    VTAB 1+4: HTAB 33:PRINT
MID$(F$(1),2,16)
240 NEXT 1
```

Line 200 creates a 15 line window on the screen. Lines 220-240 print the first 15 filenames into the window. Note that the actual name of the file is contained in the positions 2 through 16 in each directory line - hence the MID$(statement in line 230.

```
250 I=1 : P=1 :REM reset the counters
 260 VTAB 4+1 : HTAB 33:
INVERSE : PRINT
MID$(F$(P),2,16);
270 K + PEEK(KB): ON (K<127)
GOTO 270 : POKE SB, 0: K=K-128
280 PRINT : NORMAL : VTAB
1+4: HTAB 33 : PRINT
MID$(F$(P), 2,16);
```

Line 260 Highlights the first filename. Line 270 waits for a keypress and when one occurs the ASC II value of the key is placed into the variable K.

```
 280 IF K = 13 THEN 330 :REM return pressed
290 IF K = 27 THEN 370 :REM ESC pressed
300 IF K = 10 AND P<N THEN P=P+1:l=1+1:
                    IF l>15 THEN l=15: PRINT
CHR$(23);
 310 IF K + 11 AND P>1 THEN P=P-1:l=l-1
                    IF l>1 THEN l=1:PRINT
CHR$(22);
320 GOTO 260
```

The lines 300,310 need some explanation. If K=10, then the down arrow has been pressed so we increase the counters l and P by one. If the down arrow is pressed when we are at the bottom of the display then the whole window is scrolled up by one screen line. The PRINT CHR$(23) scrolls the Apple 80 column display up one line.

Likewise, if K = 11, then the up arrow has been pressed and we do the opposite to the line above. Note that PRINT CHR$(22) scrolls the 80 column display down one line.

When we exit the routine through line 280 by pressing return, the selected filename will be F$(P)˜. This is used in the next section.

```
330 TEXT :HOME : PRINT "Reading the file into
memory".
340 L = VAL(MID$(F$(P),63) :REM get length of file.
 350 F$ = MID$(F$(P),2,16):REM F$ now contains the
filename only.
360 PRINT CHR$(4)"BLOAD";F$;"TTXT,A$6000"
```

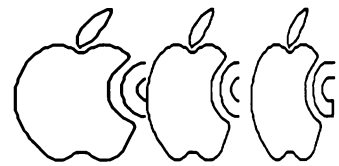
Line 360 reads the file into memory at memory address $6000 (decimal 24576). Note, in Prodos you can BLOAD a TEXT file (or any type actually) by using the optional T parameter - hence the "TTXT" in line 360.

That's it .. All that remains is the ESCAPE route -

```
370 END
```

Errol Chopping,
Consultant, Computer Education, Western Region

Squeezing the best out of your Apple



by Gene Stephan

Title: Squeezing the Apple - Advanced Programmer's Guide to the Apple IIc and IIe
Author: D.M. Pickering
Publisher: Balmoral Systems (08) 296 3498
Size: 15cm by 21cm by 114 pages
Cost: $39.50 post paid, includes disk

The book *Squeezing the Apple* is a very good local product at a very realistic price. It has been written as an introductory text for anyone wanting to get beyond the manual with their Apple.

I have reviewed a number of books in this column and it has become relatively clear from the first two or three pages of these literary works what the underlying motivations of the authors may have been. In some cases it appears to be bucks, made as painlessly as possible. In other cases however, it appears the author is motivated by a love for the Apple - undreamed of discoveries are made and sharing these becomes imperative, even if someone has done it before. Invariably such books follow a learning curve logically - after all the author's been there - and do provide very useful information.

Probably no work can be totally lumped into one such category, but on reading *Squeezing the Apple* I felt it would go close to the second one above.

The book aims to extend the reader's understanding of Applesoft and 6502 machine/assembler. Along the way the book presents examples of how to modify/enhance Applesoft for more power, access ROM routines to speed up code, and fix some bugs in Apple software and manuals.

As such, this book does require some understanding of ProDOS, Applesoft and machine, though the level is not excessive. And if asked for the main criticisms of the work, one would have to be that Mr Pickering felt obliged to spend the first two chapters (albeit short chapters) on calming our nerves and pointing us to the Apple manuals.

From **Chapter Three - How Applesoft Works**, the content picks up significantly. In this chapter, the reader is given a short run-down on how an interpreted language works and where to find the critical code.

Chapter Four, Locating Machine Code in Memory, deals with safe areas for machine code to reside, and explains what to look for when searching for Applesoft programs in memory.

Chapter Five, Subroutines in ROM, is a list of some of the JSRs in the monitor. Quoting from the book, "The following series of Applesoft subroutines provides the means to construct very effective and economical machine language sub-programs which may be accessed by '&', CALL or USR statements ... to replace literally pages of (Basic) code with a few bytes." While the list is nowhere near as extensive as is to be found in the Atlas, about 14 pages are devoted to these locations.

Chapter Six, Examples of ROM Subroutine Calls, applies the information of the previous chapter to some trivial and some not-so-trivial examples. When it comes to machine language, I am a great believer in trivial examples to start with. This is because machine language can appear quite complex to the novice who has played with Basic, and early results are important. This chapter handles the pace very well.

Chapter Seven, Formatting Numerical Output, introduces PRINT USING first through Applesoft and then through machine. The chapter is a little long and may reflect Mr Pickering's background (civil engineering) and his priorities for speeding up his Apple.

Chapters Eight and Nine, A Basic Programmer's Disk Using /RAM, and **An Assembler Disk Using /RAM,** discuss and create RAM disks using Basic and Assembler. Chapter Eight is quite detailed while Chapter Nine draws on some of the code and comments from the previous chapter.

Squeezing the Apple concludes with **Chapter Ten, Tips and Bugs**, which itemises some of the errors the author has found in the Apple publications and on the //c Utilities disk.

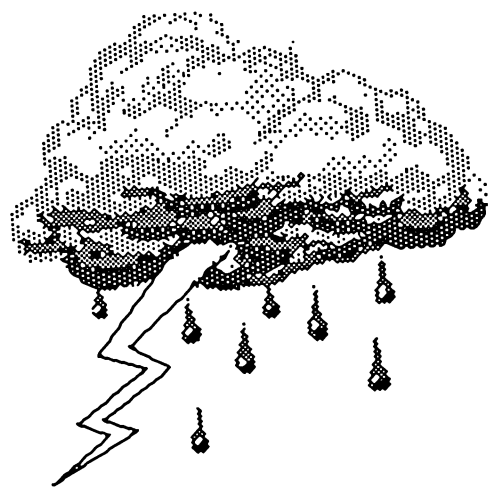
I have left the best part of the book until last - most of the programs are provided on an accompanying disk included in the cost. I do not wish to sound too negative of some of the larger book publishers (for example Pitmans and Prentice-Hall), but too often the book is listed 'with disk' and the disk either is unavailable from the US or must be gold plated for the price-tag. Here the tedium of keying in Basic or machine is removed in the inside cover, and the reader can explore what is being said rather than practice typing.

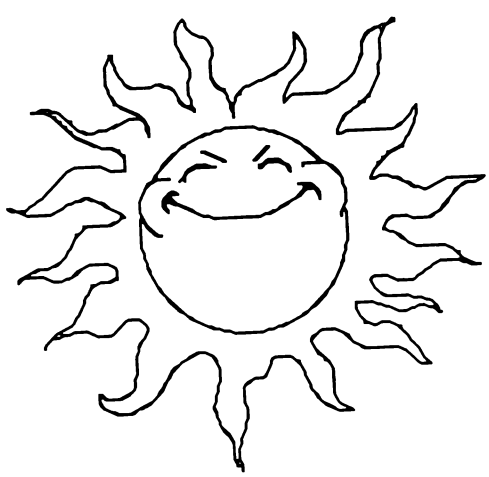
Overall, I found the book very good. It is not long, and at times I did wish more explanation was devoted to some sections and greater depth was attempted in others. However, for insights into Applesoft and the elegance of machine, the book will certainly whet the appetite for thicker texts. And, it is local product.

A program example from *Squeezing the Apple:*

ROMSEARCH Prints address of each occurrence of two nominated bytes in ROM.

```
10  REM ********************* ROMSEARCH ***************************
20  REM   Filename ROMSEARCH.COMB (combined BASIC and machine code)
30 BL$ =  CHR$ (7): GOTO 170
40  REM ------------------ HEX INPUT SUBROUTINE -----------------------
50 B$ = "": POKE 1403,39: REM -- Horiz cursor
60  GET A$: IF A$ =  CHR$ (13) THEN 100
70  IF A$ = > "a" AND A$ < = "h" THEN A$ =  CHR$ ( ASC (A$) - 32)
80  IF (A$ < "0" OR A$ > "9") AND (A$ < "A" OR A$ > "F") THEN PRINT BL$;: GOTO 60
90  PRINT A$;:B$ = B$ + A$: GOTO 60
100  IF B$ = "" THEN 60
110  PRINT  CHR$ (29);:L =  LEN (B$):V = 0: POKE 1403,0
120  FOR I = 1 TO L:A =  ASC ( MID$ (B$,I,1))
130 V = A - 48 - 7 * (A > 64) + V * 16
140  NEXT :F = 0: IF V > 255 THEN  PRINT BL$;: GOTO 50
150  RETURN
160  REM ------------------- MAIN ROUTINE ----------------------------
170  HOME : PRINT  TAB( 27);"TWO-BYTE ROM SEARCH": PRINT : PRINT
180 BASFIN =  PEEK (175) + 256 *  PEEK (176): REM -- BASicFINish $AF,B0
190  CALL BASFIN - 21: REM -- Initialising code 21 bytes long
200  PRINT "Enter 1st HEX byte ";: GOSUB 50:B1 = V: PRINT
210  PRINT "Enter 2nd HEX byte ";: GOSUB 50:B2 = V: PRINT : PRINT
220  & B1,B2: REM --------Call M/C routine
230  PRINT : PRINT "Finished": END
```





```
085A: 20 F8 E6  JSR $E6F8    ;Evaluate B1 into X
085D: 86 06     STX $06      ;Store it in $06
085F: 20 F5 E6  JSR $E6F5    ;Skip comma, get B2 into X
0862: 86 07     STX $07      ;Store it in $07
0864: A9 65     LDA #$65     ;Store ROM code
0866: 85 08     STA $08      ;   start $D365
0868: A9 D3     LDA #$D3     ;   into
086A: 85 09     STA $09      ;   $08,09
086C: A0 00     LDY #$00     ;Get first ROM byte
086E: B1 08     LDA ($08),Y  ;
0870: C5 06     CMP $06      ;Compare with B1
0872: D0 08     BNE $087C    ;Branch if no match
0874: A0 01     LDY #$01     ;If first byte matches,
0876: B1 08     LDA ($08),Y  ;   get the following one
0878: C5 07     CMP $07      ;Compare it with B2
087A: F0 00     BEQ $0889    ;Print address if both match
087C: E6 08     INC $08      ;Else increment address
087E: D0 02     BNE $0882    ;   in $08,09
0880: E6 09     INC $09      ;
0882: A9 F8     LDA #$F8     ;Stop when high address = $F8
0884: C5 09     CMP $09      ;   (Monitor starts at $F800)
0886: B0 E4     BGE $086C    ;Not finished - repeat
0888: 60        RTS          ;All done
------------ Address printing routine ------------------
0889: A5 09     LDA $09      ;Get address high byte
088B: 20 DA FD  JSR $FDDA    ;Print it as two-byte Hex
088E: A5 08     LDA $08      ;Get low byte
0890: 20 DA FD  JSR $FDDA    ;   and print it too
0893: 20 57 D8  JSR $D857    ;Print 1 space
0896: 38        SEC          ;Resume search
0897: B0 E3     BCS $087C    ;   (branch always)
------------ 21 byte initiating routine ----------------
0899: A9 4C     LDA #$4C     ;Store JMP in "&" vector
089B: 8D F5 03  STA $03F5    ;   at $03F5
089E: 38        SEC
089F: A5 AF     LDA $AF      ;Subtract total code
08A1: E9 54     SBC #$54     ;   length $0054 (84 dec)
08A3: 8D F6 03  STA $03F6    ;   from $AF,B0
08A6: A5 B0     LDA $B0      ;   and store
08A8: E9 00     SBC #$00     ;   result in
08AA: 8D F7 03  STA $03F7    ;   $03F6 and $03F7
08AD: 60        RTS
```

In the May issue - Apple Assembler part two - we covered the Load and Save instructions (LDA, STA etc), the DEC and INC instructions and introduced the concept of Boolean Logic. We discussed the Absolute and Immediate addressing modes and mentioned the importance of the flags (or P register) with respect to decision making and program flow.

In this article I'll describe Accumulator addressing and demonstrate some of the instructions which make use of the flags.

Accumulator addressing is simply that which operates on data in the accumulator rather than data at an absolute address or supplied by the operand. There are only four instructions which use this form of adddressing. The first of these is Arithmetic Shift Left (ASL). This and the ROtate Left instruction both shift the data in the accumulator (or at an absolute address) by one bit. They are best understood by looking at the diagrams.

Apple Assembler Part III

by Craig Kirkwood

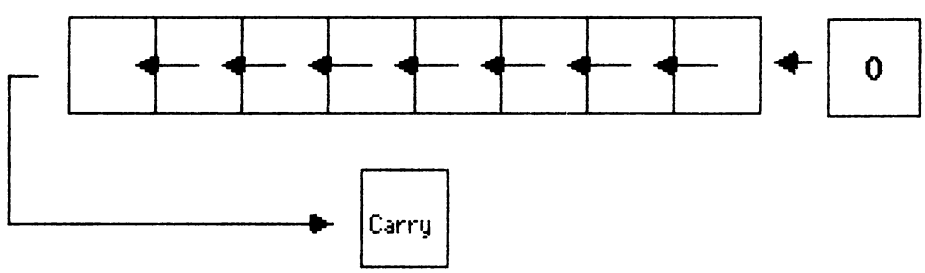


Fig 1 Shift Left

As FIg 1 shows, the shift left instruction (ASL) shifts to the left all the bits at the specified locaton. The Most Significant Bit (MSB - extreme right bit) is shifted into the carry flag and a zero is shifted into the Least Significant Bit (LSB - extreme left). This instruction is used when multiplying and dividing, among other things; I'll demonstrate its potential when we come to deal with binary arithmetic.

Now, lets compare the ASL instruction with the rotate instruction ROL.

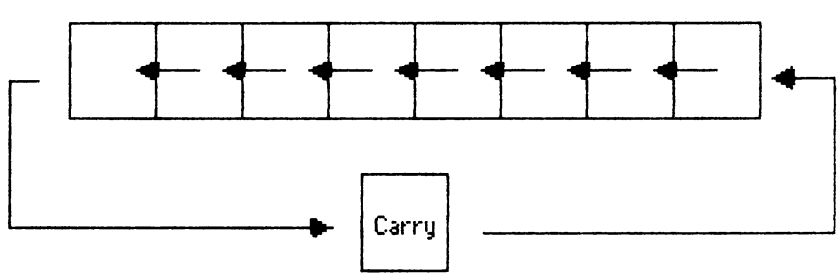


Fig 2 Rotate Left

The rotate instruction again shifts all the bits one place to the left, but this time the LSB is loaded with the current contents of the carry flag rather than with a zero. The MSB, as before, is shifted into the carry flag and thus a complete nine bit loop occurs. Let's take an example, ASL $A230

This instruction, when executed will:

1) Go to location $A230
2) Shift the data at that location one bit to the left
3) Update status register (Flags)

There are two further rotate/shift instructions and these merely do exactly the same in the reverse direction. LSR (Logical Shift Right) instructs the processor to shift to the right by one bit. This time, of course, it is the LSB (rather than the MSB) which is shifted into the carry flag - which makes sense since where going the other way. Again, with the ROR (ROtate Right), the data is rotated through the carry flag in the same manner as the ROL instruction.

All four of these opcodes make use of the status register - in this case the carry flag. I mentioned in the previous article that at the completion of each instruction, the processor updates the flags before preceeding to the next instruction. This step is vitally important. Some opcodes have no effect on the flags when executed, but most effect at least some of them. We know the carry flag is altered by the rotate/shift instructions, but in addition to this, the Zero (Z) and Negative (N) flags are also affected, informing the program that the result of the shift was zero or a negative value respectively. The way in which the processor decides if the result was negative or positive is also significant, however I'll expand on this when we discuss arithmetic.

There are a further two instruction which use the carry flag . These are the add with carry and subtract with carry instructions. Add with carry, (ADC), arithmetically adds the contents of the accumulator with the data specified by the operand. These instructions can be used in any of the addressing modes so far mentioned, with the exception of accumulator addressing. For example, ADC $A234 :

1) Fetch the data location $A234
2) Add the data to the contents of the accumulator
3) Add the carry flag to the result
4) Update the status register

As can be seen by this example, the carry flag forms part of the addition. Again the significance of this will become evident when we discuss binary arithmetic.

Subtract with carry (SBC) subtracts the data specified by the operand from the accumulator. Now here is a nasty trick! Rather than subtract the carry flag from the result, in fact the inverse of the carry flag is subtracted, i.e. if the flag is set (1) nothing is subtracted from the result and likewise if the flag is cleared (0), 1 is subtracted from the result. The carry flag, in fact, is used as a "borrow" for the subtraction. I should mention at this point, that there are several instructions which set or clear individual flags (e.g: set carry flag/clear carry flag). These instructions use inherent addressing, more of which I will discuss in future issues.

The remaining four opcodes which appeared in the table I presented in the May issue, also make use of the status register. CoMPare accumulator (CMP) is a very useful instruction used to compare the contents of the accumulator with the data specified by the operand. This opcode actually instructs the processor to subtract the specified data from the accumulator. The result is not actually stored but the flags (NZC) are "conditioned", depending on whether the result is positive, null or negative, respectively. The value of the accumulator remains unchanged. If the data and the accumulator are identical, the zero (Z) flag is set. The C flag is set when the accumulator is greater than or equal to the data , and the negative (N) flag set if the result of the subtraction was negative. Taking an example, CMP #$FF20:

1) Subtract $FF20 from the accumulator
2) Update the status register
3) Disregard result

Note that in this example, I used immediate addressing using $FF20 as the data rather fetching the data from that address.

The ComPare X (CPX) and ComPare Y (CPY) instructions are identical to CMP except they operate on the X and Y registers respectively. Again the contents of the registers remains unchanged.

The BIT instruction is somewhat more complex. When this is executed, the logical (Boolean) AND of the accumulator and specified data is performed, but not stored. The result of the comparison is indicated by the Z flag. Z = 1, if the comparison fails; 0 otherwise. In addition, bits 6 and 7 of the data are transferred into the V and N flags, respectively. The contents of the accumulator remains unchanged.

That concludes the opcodes presented in the table in the May issue. It is however, only about half of the 6502 instruction set. The remainder use either inherent or relative addressing.

We have seen that the opcodes we have so far discussed updated the status register in order to provide some information to the program as to the result of the instruction. There are, however a range of instructions which perform a specific operation by looking at the flags and making a decision based on their status; these are the conditional branch instructions.

The branch instructions themselves have no effect on the flags. Their operation is fairly simple, the following table summarises their behavior.

BEQ	Operand	Branch	if equal to zero	Z=1
BNE	"	"	if not equal to zero	Z=0
BPL	"	"	if plus	N=0
BMI	"	"	if minus	N=1
BCC	"	"	if carry clear	C=0
BCS	"	"	if carry set	C=1
BVC	"	"	if overflow clear	V=0
BVS	"	"	if overflow set	V=1

Thus using these instructions, program flow can be directed based on virtually any mathematical result. The following short program provides a good example of the use of branch instructions.

```
START  LDX  #$20      ;store $20 at X-Register
       LDA  #VALUE    ;Load accumulator with "VALUE
       CMP  LOCAT     ;compare with data at "LOCAT"
       BEQ  SAME      ;if equal go to "SAME"
       DEC  LOCAT     ;decrement data at "LOCAT"
       BMI  NEGAT     ;branch if negative
SAME   BRK            ; end here
NEGAT  DEC  LOCAT     ;decrement
       BPL  START     ;loop back if positive
       DEX            ;subtract 1 from X-Reg

  BNE  START  ;if NOT 0 then loop backd
  BRK    ;end here
```

In this program (which incidently does not do anything particularly constructive), several decisions are made depending on the result of the previous instruction. In the fourth line the program is to jump to the instruction at location "SAME" (label used by the Assembler) if the result of the compare instruction was positive. In the Sixth line the program will go to location NEGAT if the result of the DEC instruction was negative etc. It would be worthwhile to analyse this program to understand the importance of the conditional branch instructions.

You may notice I have used labels rather than numbers when specifying addresses and data throughout the listing. This is a good habit to develop when programming in assembly language. The value of the labels is defined elsewhere in the program (usually at the beginning), by a series of "assembler directives" or "pseudo" opcodes which inform the assembler what the labels mean at the time of assembly. The use of labels ensures that the program remains "relocatable" i.e. not restricted to a specific machine and, more importantly, makes the code far easier to understand and hence de-bug!

Next month I'll introduce the remainder of the instruction set and we'll take a look at the "Stack" - a reserved area of memory which is very usefull to the assembly language programmer.

SATURDAY COMPUTER SERVICES

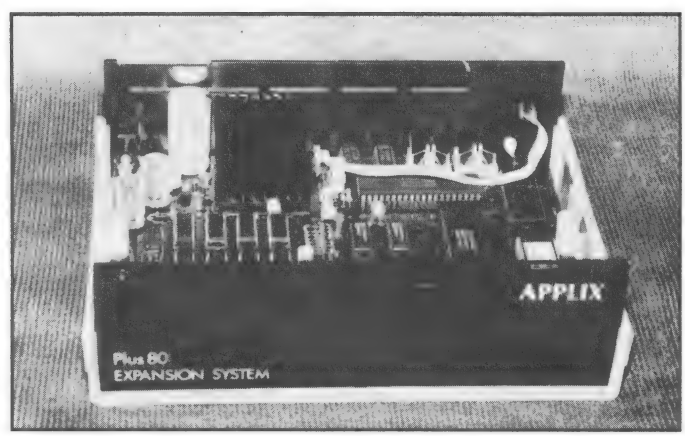
MAIL ORDER LIST

HARDWARE SPECIALS

APPLIX - CP/M FOR THE APPLE

Applix Plus 80 Expansion System, as reviewed in *Australian Apple Review,* July 1985.Gives a simple, efficient solution to a lack of CP/M on a IIe or IIc, without the need to pull the computer apart.
Excellent local product, supplied with utilities software.
Purchasers obtain 12 months subscription to *Australian Apple Review,* free of cost, with each purchase.

64K RAM $499
64K and CP/M $625
26KK and CP/M $765



Comparison of Applix CP/M and Cirteck CP/M

Feature	Cirtek	Applix
easy installation	NO	YES
extra RAM	NO	YES
keyboard enhancement	NO	YES
utilities software	NO	YES
parallel printer port	NO	YES
pages in manual	4	74
local product	NO	YES
cost	$299	$499-$775

3.5 inch disk storage boxes $25

5.25 inch disk storage boxes (100) $35

Copy holders - a must for the office or when entering data or text into the computer from sheets of paper. Stylish, swinging arm allows you to position the holder at the right level for your eyes **$55**

I can highly recommend Saturday Computer Services and the products advertised in their catalogs.

Gareth Powell

SATURDAY COMPUTER SERVICES

BUSINESS AND PERSONAL DEVELOPMENT

CAREER PLANNING
Identify career paths to steer yourself along. Solid program.
79.95

DELEGATION TIME AND TASKS
The how-to of critical time plan ning. Good for managers + bosses.
79.95

MICROSPEEDREAD
Approaches speed reading as an information gathering process.
99.95

COMMUNICATIONS

TERMINAPPLE
Written by our local Paul Zabrs, this program is widely acclaimed as the best communications software around.

UTILITIES :

PRINT SHOP
Simple to use yet amazingly powerful - a must for anyone with a dot matrix printer. Reviewed Jan|Feb AAR.
74.95

EDUCATION AND EDUCATIONAL GAMES

DINOSAUR DIG
Unearth the mysteries of the pre historic and learn about dinos!
39.95

DLM EDUCATIONAL SERVICES FOR 4-8 YEAR OLDS
Each disk has 6 activities or games that teach with dazzling graphics or games.
49.95 each.
Animal Photo Fun
Comparison Kitchen
Fish Scales
Alphabet Circus
Number Farm
Shape and Color Rodeo

MASTER TYPE IIE IIC
Learn typing while you play. There's action plus all the way!
69.95

MATH BLASTER
Mathematics with a difference for primary school children.
89.95

MACINTOSH

FILEMAKER
Powerful Data Base
290.00
MAC MEMORY DISK
Ram Disk For 512k
55.00
MAC PLOT (V 2.0)
Plotter Driver
290.00
MAC PLOT PROFESSIONAL Plotter Driver For Large Paper Types 357.00
MAC TURBO NUMERIC
Track-Ball/Numeric Keypad
380.00
MICRO PLANNER
Critical Path/Project Planner
650.00

NEON
Threaded Language - FORTH Like
390.00
OVERVUE 2
Updated version of popular data base
380.00
OVERVUE 2 (Upgraded)
For those with verion 1
30.00
STORYBOARDER
Prof. StoryBoarding/Animation
1650.00
THINKTANK 128k
Ideas Processor for thin Mac
170.00 THINKTANK 512k
Ideas Processor for Fat Mac
300.00
THUNDERSCAN
Digitise Pictures, Drawings etc.
575.00

GAMES - ARCADE, ADVENTURE AND STRATEGY

CHAMPIONSHIP LODERUNNER
Only for the experienced Lode Runner or Jumpman addict. Excitement plus! Reviewed Apr|May AAR.
49.95

CARRIERS AT WAR
War gaming at its most realistic. Huge dimensions. Variably complex.
49.95 (Reviewed in this issue of AAR)

FLIGHT SIMULATOR
The only thing better is a real airplane. Dogfight is superb!
89.95

JUMPMAN
Super fast arcade game with 30 different screens to play!!
39.95

LODE RUNNER
The original game. Build up your strength for Championship play!
49.95

MURDER BY THE DOZEN
12 murders to test the deductive logic of up to four players.
39.95

SARGON III
The most powerful chess program for the Apple. 9 levels of play. Explanations, strategy developed.
74.95

SUMMER GAMES II
Challenges you to eight different Olympic-style events.
39.95

WINTER GAMES
Includes Bobsled, Ski Jump, Figure Skating, Free Style Skating, Speed Skating, and lots more.
39.95

ZORK I, II, III
The underground empire awaits you in this adventure cult trilogy.
Zork I - 59.95, II and III - 69.95 each

THE DALLAS QUEST
Who else could lead you from Southfork to South America in quest of $2 million but J.R. Ewing.
39.99

CONAN
Seven levels of exciting graphics and great adventure.
39.99

ZORRO
Sword fight your way across screen after screen of oppressors, using every available muscle. Look in Vol 3 No 1 of AAR for full review.
39.99

BRUCE LEE
His body is his weapon and now he's ready to join forces with you.
39.99

SATURDAY COMPUTER SERVICES

NEW RELEASES

Nine Princes in Amber

You are a prince of Amber, fighting for the throne against your eight brothers and four sisters - all of them treacherous. Yet you must gain the support of some of them if you are to succeed. And that will be as complex and tricky a game of politics as you ever hope to play. Especially without your memory.
Price: $49.95

Perry Mason: The Case of the Mandarin Murder

Victor Kapp is dead - murdered. Laura is in jail, charged with his death. And facing trial very, very soon.

You'll have to work fast - and smart. Dig into people's lives.

The first interactive mystery to use the world-famous criminal lawyer created by Erle Stanley Gardner. It also represents a major breakthrough in interactive fiction: the cooperation of the characters and jury changes as a direct result of your interactions with them.
Price: $49.95

APPLE IIe & IIc

(These mouse-driven programs were reviewed in November 85 *Australian Apple Review*)

MOUSECALC
Spreadsheet with Mac-Like Menus
199.00

MOUSEWORD
Word Processor using Mouse
199.00

MOUSEBUDGET
Home/Small Business Tool
100.00

MOUSEDESK
Macintosh like Front-End
75.00

THINK TANK IIe
Ideas Processor
180.00

ORDER FORM

Postage and packing on each item : please add 1.25 for software
1.50 per box blank disks
2.50 per book
3.75 for hardware listed

Please apply for bulk rates.
Orders greater than $475 obtain a FREE subscription to AAR for 1 year, or FREE postage and packing.

Please list each item that you require, then add your name and address and post together with cheque or Bankcard number to :

SATURDAY C.S., P.O. BOX 189, ST PAULS POST OFFICE,
RANDWICK NSW, 2031
(02) 398 5699

NAME ..... ITEM COST
ADDRESS..... ....
....
....
....
....

Payment * Cheque enclosed ..... Add pßp _____
or * Bankcard

TOTAL .....

.....
bankcard ≤ expiry date signature

Daisy Professional

CHARLES MCMONNIES looks for a research orientated statistics package

Judging anything from a small sampling that may not be representative is hardly recommended, but this review has been on the warmer for quite a while and may never surface if I wait for my breadth of experience with Daisy Professional to reach reasonable proportions.

Besides, an offer to the honourable editor to do this review is a matter of conscience.

I have been nibbling at Daisy Professional's range of services according to need rather than curiosity. My experience with it then is considerable but over a limited range of the functions available.

What I needed was a research orientated statistics package that could be run on the Apple and which would allow for convenient analysis of research findings, especially as samples were building.

As most of my interests are in clinical research, I sought the convenience of taking newly acquired data home, on a daily basis if necessary, and adding them to an existing file and running sequential tests of significance.

Apart from relieving my impatient curiosity, this type of monitoring has allowed potentially fruitless studies to be modified before too much time is wasted. Experimental design can be tightened with the advantage of progressive hindsight when new ground is being broken.

These needs remained unsatisfied for a long time due to lack of co-operation with local suppliers of software. I might just as well as have been speaking in a foreign language when I tried to explain my requirements.

No, local suppliers didn't know about research statistical packages for Apples, and they mostly didn't think they knew of who would know. I suppose I was better pleased with those whose disinterest meant they didn't offer to find out and ring back, because those that offered to ring back with information, didn't. Score 0 out of 10 for the locals.

Through personal enquiries I found out about several programs that had been used in Australia, but most of those users had switched to mainframe applications.

There seemed little point in following up any of these leads, as they were all unsatisfactory, being either too expensive, too limited in scope, required *dBII* for data management, ran on CPM etc. Besides I was soon going to the U.S. where enquiries in Los Angeles were surely going to be fruitful.

The first thing I found out was about the Blue book, a massive reference tome that listed 68 programs related to statistical applications. But it still took 30 or 40 mostly local calls from my hotel room before my enquiries narrowed down to a choice of Daisy Professional.

No demonstration was available as it was not a stock item. With a heart full of hope I secured a promise of earliest delivery by telephone in exchange for an American Express card number. At $50 a round trip by cab to complete the contract in person when the software was costing under $200, I was risking ending up empty handed or in possession of a dud product. I just want the reader to know it wasn't easy.

However, a month later a growing anxiety was thankfully deflated with the arrival of a start-up disk which included sample data, and which can't (?) be copied, and a program disk which can be copied. Copyright is protected by the need to load the start-up before a copy of the program. It is an imperfect world.

Fortunately only one manual is part of the package. None of that stupid Reference manual versus Tutorial manual that Apple usually inflict on us.

Mounting joy to find that I can understand and manage a set up of Daisy in accordance with my system configuration. Further joy to find the getting acquainted tutorial is free of the bugs that are usually encountered.

Soon I was working with data from a current study and too busy to explore the balance of Daisy's charms.

One bonus came out of the Manual's introduction, which recommended several statistics texts for reference in using Daisy. The recommendation of Siegel's *Non Parametric Statistics for the Behavioural Sciences* led me to far and away the best, most practical statistics text I have ever had the pleasure to use.

The author of this manual (Kevin C. Killion) is clearly not inexperienced in statistical matters, and after two orientation/tutorial chapters there is considerable emphasis on the preliminary handling of data.

Chapters 3 to 11 thoroughly detail data entry, handling, manipulating, displaying, printing, transforming etc. If your data are incomplete for any reason (subjects who drop out or miss some measurement sessions for example), Daisy provides methods for handling the fragmented results.

Descriptive statistics and hypothesis testing are dealt with in the next six chapters. Starting with basics, there is a choice of 15 descriptive statistics from means through Kurtosis to sum of squares. Summary tables and crosstabulatikons can be examined using Chi-square, and Phi and Cramer's V. Then follows chapters on correlation, non parametric correlation (Spearman and Kendall for example), regression analysis

(including ANOVA), and then a chapter on hypothesis testing which includes T-tests, ANOVA, Wilcoxon, Mann-Whitney U, Friedman two-way ANOVA, and Cochrane Q.

As well there are a number of options available for displaying data and results, including high resolution graphics.

There is hardly likely to be a widespread demand for this type of program and there may be cheaper and better alternatives. However, if the path to them is as tortuous as that which led me to Daisy, I would be settling for this product in a flash.

System Requirement:

An Apple II with an Applesoft ROM card, an Apple II+, an Apple IIe, or an Apple III in Apple II emulation mode. In the case of a IIe, Daisy Professional makes good use of the extra memory provided by an extended 80-column text card.

The default structure is 10 columns allowing for 260 rows (II and II+ with 48K), 400 rows (with 64K) and with a IIe and 128K of memory approximately 830 rows will be available. The default arrangement can be changed to 2 columns by 640 rows or 20 columns by 130 rows on a 48K computer and to 5 columns by 1290 rows or 20 columns by 480 rows with 128K.

Daisy's style is described as conversational by its author, referring to the fact that it is menu driven and to its capacity to provide a list of help options at any stage, even during a calculation.

Daisy may give a warning signal if accuracy checks, that run concurrently with calculations, detect problem sets of data. Running a known set of data (from a text book for example) prior to working with your own results, can confirm Daisy's capacity to handle your data correctly.

Daisy is controlled by its own operating system so that, for example, a File command provides a menu that allows for the examination of the catalogue of a data disk, the loading of data from a file, the overlay of data onto a data table, the saving of data to a file, examining a data file, the change of the logged drive for data and the change of data format.

Once a session is started with Daisy it is unnecessary to have to revert to your usual operating system, unless you run out of formatted data disks, or some other housekeeping slip-up.

Can be obtained through Statusgraph, (02) 699 7662.

Convenience in handling data is emphasised by the large range of transformation menus and options available in the Daisy Program

```
                TRANSFORMING DAISY DATA

               -> TRAN

               SELECT OPTION:

                 A - ADDITION TRANSFORMS
                 S - SUBTRACTION TRANSFORMS
                 M - MULTIPLICATION TRANSFORMS
                 D - DIVISION TRANSFORMS
                 T - TIME SERIES TRANSFORMS
                 O - OTHER TRANSFORMS

               YOUR CHOICE?
Basic Four-Function Transforms

If you select addition, subtraction, multiplication or division, you can
choose to operate on two columns (e.g., add the values in column 1 to
those in column 2), or on a column and a constant (e.g., multiply -1 by
all the values in column 5).

Operations on Two Columns

For example, here's how to add the values in column 3 to the values in
column 5, with the results placed in column 7:

               YOUR CHOICE? A

               DO YOU WANT:
                 1 - PERFORM OPERATION ON ONE COLUMN
                     AND A CONSTANT
                 2 - PERFORM OPERATION ON TWO COLUMNS

               YOUR CHOICE? 2

               SPECIFY TWO COLUMNS:
               COLUMN (NAME OR #) ? 3
               COLUMN (NAME OR #) ? 5
               PLACE RESULTS IN WHAT COLUMN (NAME OR #) ? 7
```

```
                TRANSFORMING DAISY DATA

               YOUR CHOICE? O

               PLEASE CHOOSE:

                 1 - ABSOLUTE VALUE
                 2 - LOG, NATURAL (E)
                 3 - LOG, BASE 10
                 4 - EXP: X' = EXP(X)
                 5 - POWER: RAISE TO A GIVEN POWER
                 6 - INVERSE: X' = 1/X
                 7 - CUMULATIVE (RUNNING) TOTALS
                 8 - STANDARDIZATION:
                     X' = (X-MEAN)/STD DEV
                 9 - INTEGER:          X' = INT(X)
                10 - FRACTIONAL: X' = X - INT(X)
                11 - ROUND: X' = INT(X+.5)
                12 - COPY WITH SUBSTITUTION

                     YOUR CHOICE?
In a bit more detail, here are further descriptions of these transforms:

1 - Absolute value - take the absolute value of the values in a column.
2 - Natural log (base e)
3 - Log (base 10)
4 - Exponential function:  raise the value "e" to the power of the values
    in a column.
5 - Power - raise a column's values to a given power.  If the selected
    power is an integer less than 10, multiplication is used instead of
    exponentiation for better accuracy.
6 - Inverse ("1/x") - each value in a column is divided into the constant
    "1".
7 - Cumulative (running) totals - create a new column that contains the
    running totals of another column.
8 - Standardization - from each value subtract the mean of the column
    and then divide by the standard deviation.  The result has mean=0
    and standard deviation=1.
9 - Integer - convert each value in a column to an integer (whole
    number).  In general, the resultant value will be the integer (whole
    number) which is equal to or just lower than the value inspected.
    Thus, this transform generates "56" when examining "56.789", and
```

Spreadsheets for

The Compleat Apple Spreadsheeter

By Roger E Clark and Trisha Johnson Swersey
Published by Prentice-Hall Inc
Distributed by Prentice Hall of Australia
Price $34.95

THE VERY FIRST program to make the Apple II into a machine beloved by the business fraternity was *VisiCalc*. When *VisiCalc* first came out it was relatively difficult to learn, fairly inflexible to use and had one of the worst manuals known to mankind. Nevertheless, almost every business executive who saw the demonstration took one look and decided overnight that this was the only way to go. Apple IIs worked their way into almost every major company - frequently being paid for out of expense accounts to speed up the process. Because the *VisiCalc* spreadsheet and the Apple II took a tedious job that used to take days and arranged so it could be completed in hours.

Before *VisiCalc* if you were working on a cashflow forecast for a major company it was a very large and tedious and error ridden job indeed.

When I was the managing director of the New English Library - that was back when there were wolves in Wales - I used to produce a cashflow forecast twice a year.

On each occasion the chief accountant, John Scougall, and I used to move into a hotel where we could not be interrupted by telephone calls. Using a hand operated calculating machine, large sheets of graph paper and dozens of soft pencils, we worked our way through the forecast of what was going to happen to the company in the coming twelve months.

I first saw *VisiCalc* demonstrated in New York and bought a copy on the spot. The program enchanted me. It took the manual process of preparing a big cashflow forecast and computerised it.

To understand exactly how a spreadsheet works, imagine a large blank piece of graph paper. Down the left hand side you can list the various income and expenditure items that affect a company - or, if you like, your private life.

For example you would list rents, rates, electricity, gas, fuel and so on.

The number of items in the list would depend on the complexity of the business.

Along the top of the spreadsheet you would put the month, if you were working on a monthly cashflow forecast, or the weeks if you were very sophisticated and wanted to be extremely accurate.

A line descending from a month coincides with a line extending horizontally across from an item on your list on the left and gives you a square in a grid. Each of these squares will contain a number. At the bottom of your spreadsheet you total up the expenditure and the income of each week or month. Take one from the other. If the income is greater than the expenditure all will be sunshine. If the reverse, you are going to have to do some careful pruning on your expenses. These figures can be carried forward so that you have a constant picture of where your company stands, or where your personal finances are headed.

Now, because you have done this on a computer, you can easily print out the results and then go back and amend the figures so that you are, effectively, cutting your coat according to your

	A	B	C	D	E	F	G	H
1	DISCOUNTED CASH FLOW RENTAL CALCULATION						PROPERTY	
2							UNDER	
3			PROPERTY	PROPERTY	PROPERTY	PROPERTY	REVIEW	
4	ASSUMPTIONS:		1	2	3	4	4	<--SWITCH
5	----------							
6	DISCOUNT RATE:		10.00	10.00	10.00	10.00	10.00	
7	ANNUAL RENTAL INC:		30000	38000	42000	104000	104000	
8	TAX RATE:		35	35	35	35	35	
9	ACQUISITION COST:$		120000	145000	187000	1210000	1210000	
10	SALVAGE VALUE $		25000	30500	45000	260000	260000	
11	MAINTENANCE		5000	6500	7250	19000	19000	
12	OTHER EXPENSES		1000	2500	3200	10000	10000	
13	----------							
14								
15	PROJECTED INFLATION RATE:				4	5	3	6
16								
17					PROJECTION FOR PROPERTY #		4	
18	----------							
19	YEAR:		1984	1985	1986	1987	1988	1989
20	NUMBER OF YEARS:		0	1	2	3	4	5
21	----------							
22	RENTAL INCOME			104000	108160	113568	116975	123994
23	MAINTENANCE			18000	18720	19656	20246	21460
24	OTHER EXPENSES			10000	10400	10920	11248	11922
25	SALVAGE VALUE							260000
26	DEPRECIATION (STRAIGHT)			193000	193000	193000	193000	193000
27								
28	INCOME BEFORE TAX			-114000	-110960	-107008	-104518	-99389
29	TAXES			39900	38836	37453	36581	34786
30	NET INCOME			-153900	-149796	-144461	-141100	-134176
31	----------							
32	CASH FLOW			36100	40204	45539	48900	55824
33	----------							
34	DISCOUNTED CASH FLOW/YEAR			32818	33226	34214	33400	34663
35	ACCUMULATED DISCOUNTED C.F.			32818	66045	100259	133659	168321
36	PAYBACK			-1177182	-1111137	-1010878	-877220	-708899
37	TOTAL DISCOUNTED CASH FLOW			168321				
38	NET PRESENT VALUE			-1041679				
39	==========							
40	@NPV=	-1041679						

Figure 8.1: Investment Model

the Apple IIs

cloth.

Then you can go back and modify, modify and modify again.

On an electronic spreadsheet, as you change one number all the other numbers which are dependent and affected by it are changed automatically.

And in that one sentence we have the reason why the spreadsheet program became so immensely popular.

Before the advent of the electronic spreadsheet, if you wanted to change one number you had to change every other single number that was affected on the spreadsheet by hand, rub out the original result you'd got and enter another one. As it was difficult to get the figures even approximately right the first time around, you would probably have to recast your forecast at least a dozen times and sometimes a lot more. That was where the problem existed, that was where the labour was involved, that was the reason why grown men were known to weep at the thought of having to do a complicated cashflow forecast. In those days cashflow forecasting brought premature senility and an early grave.

And that is why the electronic spreadsheet became the most popular program for computers after wordprocessing, why the spreadsheet drove the personal computer revolution.

There is a new book out called *The Compleat Apple Spreadsheeter*, written by Roger E Clark and Trisha Johnson Swersey. In the introduction Roger Clark writes:

"One day in the fall of 1979 the postman brought a package which I had not ordered from a company we had not heard of - Personal Software. The package contained a diskette and a manual for a program called *VisiCalc*. After five minutes of watching a free-running demonstration/tutorial about the new program which was on the flipside of the diskette I was hooked. I finally left the computer that night about midnight. I knew then that a new and significant function had entered the micro computer world - the spreadsheet program. From that moment on micro computers could be sold because of an application program - just showing the power of *VisiCalc* often became enough to sell a desktop system."

The book is intended for people who already use spreadsheets and have found them a marvellous business and scientific tool. It starts off with the basic premise that almost no user ever harnesses the full power of a spreadsheet program. Basically because the programs are so sophisticated and multi-layered.

The book deals with three spreadsheet programs available for the Apple II, Apple IIe and Apple IIc. These are *Visicalc*, *MultiPlan*, and *SuperCalc3*. It takes business situation after business situation and explains how it can be dealt with using a spreadsheet. The list includes break even analysis, weighted scoring, ledger systems, loan amortisation calculator, schedule forecaster, interest calculator, rental cashflow and many, many more for spreadsheets.

If you use the computer and spreadsheet professionally in a business, then this book would appear to be helpful, desirable and very possibly essential.

The Worm in the Apple

GATHER ROUND, kiddiewinkies, and a strange tale I shall unfold. A company called MTE - which I am led to understand means Management Technology Education - had the bright idea of running seminars on desktop publishing.

As the two principal speakers they obtained the services of the editor and publisher of this august journal and of Matt Whelan, the ever smiling and slightly demented man from Your Computer.

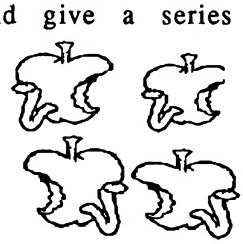
In its last stage the seminar came under the protective wing of Graeme "Phar Lap" Philipson, who was once, back in the mists of time, the editor of this journal. The founding editor no less.

Was the seminar a success? The publisher and editor of this journal is a man known for his modesty and shyness but he was willing to concede that, yes, it did seem to move along quite smoothly. And MTE in a flush of generosity sent him a dozen bottles of the finest French bubbly by way of congratulations.

Then dawned the morning after.

It appears our gallant publisher and editor (one has to be polite otherwise he will stamp on this poor worm) was invited to a slap-up lunch at one of the more expensive eateries - a place where a worm would never be admitted under any circumstances.

After he had been much plied with spirituous liquors, he was asked if he would give a series of repeat performances. Sadly it was for a fee he considered niggardly. He said unless the stout and splendid operators of MTE were willing to seriously rattle the can for more cash, he would be forced to move to Fresh Fields and Pastures New.



The decision was apparently later made by MTE to increase their offer. But not, it seems, enough to gladden the miserly Welshman's heart.

At which, both sides parted amicably.

Then Fate took a hand.

Our Welsh publisher decided that if he was a MegaStar of Edna Everage proportions then he should capitalise on it and run a seminar himself.

To announce it he took an advertisment in the *Sydney Morning Herald* which, by strange coincidence, is the paper he works for.

By even stranger coincidence, on the facing page on the same day appeared an advertisement announcing the next desktop publishing seminar of MTE.

And strangeness piled upon strangeness, both announced the speaker would be Gareth Powell.

MTE management's confusion at dropping such a brick was palpable. I am assured by a worm that lives in the premises that it was red faces all round and that sackcloth and ashes were worn.

MTE said matters would be righted.

They ran the same advertisement the following week but with the name Les Bell replacing that of Gareth Powell.

And underneath, in the smallest type ever seen in a newspaper, it announced that Gareth Powell would not be appearing because of prior commitments.

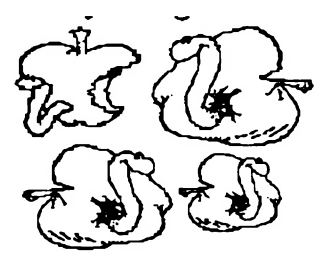
This was, apparently, MTE's view of the way an apology and a correction should be handled. We worms do it in a slight different way. But then, we worms always had strange ethics.

Elsewhere in this issue is a review of a program called *MacAuthor*. It comes from England, and my pommie cousin Jeremy Worm says that early copies were quite bug ridden. And has sent me documentary evidence to prove it.

This consists of five failrly closely typed pages listing the bugs and their corrections. All well and good. But the pages of corrections are full of spelling mistakes. Quite horrid and nasty.

What, this worm pensively wonders, is the Old Dart coming to?

Illiteracy of another kind comes from Ashton-Tate, who have just launched their Macintosh version of *dBase*. For it they have coined the amazing slogan, "Takin' it to the streets". What this can mean I have simply no idea. That it is unilluminating I am quite certain.



Judging by the advertisements I read in the press, Apple are taking on more staff to deal with the current upsurge in sales. All well and good, but there is no way the Stately Pleasure Dome in Ryde could possibly take any more staff unless they are stacked vertically or unless the toilets are converted into cosy and convenient workstations.

My worm spies in Ryde confirm the space problem exists. I understand that Apple will eventually be building a Stately Pleasure Dome Mark II and that even as we speak plans have been drawn up. But we all, having had experience of Australian building practices, realise that opening day is some way away in the hazy future.

Until then what will Apple do for space?

Rumour has it that the personnel department has been instructed to

hire only very small thin people with a touch of anorexia nervosa. This cannot be true, surely.

By the time you read the next issue there will be a new Apple computer announced to the world. How do I know this?

My Chinese cousin, Confucius Worm, walked into the Apple offices in Hong Kong. And there it was. Before his oriental eyes.

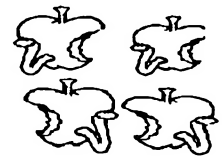
If the production models are already in Hong Kong then they will soon be in Australia.

I have promised faithfully not to discuss it in detail, but my understanding of the technical details - a slightly murky understanding 'tis true - leads me to believe that this machine will blow the socks off all the opposition. Not only will it cut a swathe through personal computers. If what I hear is true it is seriously going to damage the situation in regard to minicomputers. It may even have mainframe applications. Watch out for more information in the next issue.

Is there anyone out there still using a 128K Macintosh? There certainly is. And there may be many more than one. In the past week this Worm has talked to two journalists, both of whom are quite happy with what they have and do not want their machines messed around with.

Happy in their ignorance the little darlings play.

I suppose it depends what you want the Macintosh for, but anyone who has used the Macintosh Plus will find it quite distressing to move backwards.



MEMOREX

Disks

BRIGHT DISKS FOR ANY COMPUTER

For More Information Call Memorex TOLL FREE 008-226117 or Sydney 908-2211 Melbourne 267-2955
New Zealand: Dataset Computer Supplies (N.Z.) Ltd. Auckland 795-561 Wellington 857-686

Circle 44 on Reader Service Card